Clinical Lecture
ON
THE ELUCIDATION OF THE NATURE AND TREATMENT OF THE DISEASES OF THE EAR,
BY A REFERENCE TO OUR BETTER KNOWLEDGE OF THE NATURE AND TREATMENT OF THE DISEASES OF THE EYE.

Delivered at University College Hospital on Thursday, January 29th, 1880,

BY PROFESSOR WHARTON JONES.

GENTLEMEN,—In the clinical lecture I lately delivered here on keratitis and kerato-iritis from inherited syphilitic taint, I necessarily had to bring under your particular notice the *deafness* which so frequently supervenes in the course of that remarkable inflammation of the eyes. I stated that, so far as we can make out, the deafness in question is owing to inflammation in the first instance of the membrana tympani, more especially the inner layer of it, which is continuous with and forms the mucous constituent of the fibro-mucous membrane lining the tympanic cavity, whilst the character of the inflammation is similar to that of the inflammation of the cornea which it accompanies.

In discussing the subject I accordingly took occasion to dwell on the *analogies*—not *homologies*, observe—between the eye and the ear. I remarked that these two organs, though at first glance so very different, do really resemble each other in many respects, both anatomically and pathologically. Moreover, I argued that as the diseases of the eye are more open to investigation than those of the ear, and therefore better understood, a cautious use of the analogy referred to between the two organs is calculated to prove of material service in elucidating the less understood nature and treatment of the diseases of the ear. Practically, indeed, I find it so both in facilitating my diagnosis and guiding my treatment of the diseases of the ear, according to something like scientific principles.

Considering all this, I have thought that I might, advantageously to you, extend my observations on the subject, and devote this lecture specially to a comprehensive view of the nature and treatment of the diseases of the ear, as illustrated by the light reflected from our better knowledge of the nature and treatment of the diseases of the eye.

In the first place let me observe that though no doubt diseases of the ear are in larger numbers beyond medical and surgical control than diseases of the eye, I am satisfied from long observation and careful inquiry into the history of cases, that this is partly owing to neglect or mismanagement at the commencement of an attack of otitis, for example. The hearing, it is to be remembered, may be much impaired from disease without the defect being noticed, and unless the patient suffers pain, attention is not for a long time attracted to the complaint; and even when there is pain, the treatment adopted is often by no means the best calculated to subdue effectually the inflammation occasioning the pain. The inflammation is accordingly allowed to fall into a chronic state, and so becomes less amenable to treatment than in the early acute stage. Earache is, in fact, too frequently viewed as unconnected with any local inflammatory action, so that the really existing inflammation is left unheeded and unchecked, while its unsuspected progress is leading to deterioration of structure such as to cause serious and irreparable impairment of hearing. In my last lecture I instanced the membrana tympani, and especially its inner layer, as one of the parts involved in the inflammation of the ear which so often supervenes in the course of keratitis and kerato-iritis from inherited syphilitic taint. I have now to add that in patients affected with scrofulous or phlyctenular ophthalmia, of which the cornea is equally the focus of the morbid process, a scrofulous inflammation of the membrana tympani is in like manner not unfrequently met with. And as in scrofulous or phlyctenular ophthalmia ulceration of the cornea, even to penetration, with all its disastrous consequences to the eye, is prone to take place, so in scrofulous inflammation of the membrana tympani, ulceration, even to penetration of it, is not a rare occurrence. Again, as in catarrho-rheumatic ophthalmia the cornea is also liable to be penetrated by ulceration, and the integrity of the eye seriously endangered thereby, so we have to encounter catarrho-rheumatic otitis in which the membrana tympani is the focus of the inflammatory process, and equally liable to corresponding deterioration of structure.

Notwithstanding this pathological resemblance of the membrana tympani to the cornea, there is, as I mentioned in my last lecture, no correspondence between the two parts in respect to analogy such as we recognise between the conjunctiva and the lining membrane of the tympanic cavity. I showed that the membrane of the fenestra rotunda of the labyrinth in the ear is the part which really corresponds in analogy to the cornea in the eye, but that if a membrane extended between the borders of the two eyelids at the inner edges, uniting them and closing in the oculo-palpebral space of the conjunctiva, we should have in it a structure analogous to the membrana tympani. Such a structure, I informed you, is actually found in serpents and the guecko tribe of lizards in front of their eyes, and has been mistaken for their cornea. I should mention that in the reptiles referred to the eyelids proper are small and rudimentary. Such a structure, moreover, I said we have exemplified in the congenital malformation affecting the human eye, sometimes met with and known by the name of *mediate anchylo-blepharon*, or union of the borders of the eyelids by an intervening membrane consisting of a layer of skin and a layer of conjunctiva.

However this may be, both the histological characters and the pathological affections of the membrana tympani have a remarkable resemblance to those of the cornea, and, accordingly, the general treatment called for in inflammation of the one is indicated in inflammation of the other.

I stated to you, however, in my last lecture that the deafness from otitis which may have supervened in the course of keratitis or kerato-iritis from inherited taint, becomes in many cases worse in proportion as the eye recovers from the inflammation affecting it; and this though the treatment employed for the eyes was evidently that indicated as most appropriate for the affection of the ears. The progressive deterioration of hearing under such circumstances is most likely owing to supervention of inflammation in the labyrinth, just as in the eyes propagation of morbid action from the cornea to the internal tunics is liable to take place. But why the ears should become worse while the eyes get better is a curious example of what we may call inverted sympathy, though examples of such are not wanting between the two eyes. For example, in a case of kerato-iritis limited to the left, and which had seriously damaged it before the patient came under my care, as soon as the destructive inflammatory process was arrested by the operation of iridectomy, the right eye, hitherto sound, became affected, and was saved only by medicinal treatment supplemented by evacuation of the aqueous humour, and subsequently, as a last resource, by iridectomy.

In regard to the treatment of scrofulous inflammation of the membrana tympani with earache, the application of two or three leeches close behind the ear in the region of the stylo-mastoid foramen, and a few doses of mercury with chalk (two grains) and powdered leaves of belladonna (one grain), with warm-water fomentations, will usually arrest the inflammation, and relieve the pain, as you so often see the same treatment do in cases of scrofulous ophthalmia.

In catarrho-rheumatic or rheumatic inflammation of the membrana tympani, with severe earache, the treatment which you daily see so beneficial in catarrho-rheumatic ophthalmia—viz., venesection or the application of leeches behind the ear, with calomel and opium—will afford equal relief. Placed as the membrana tympani is between the auditory passage and the tympanic cavity, it necessarily becomes more or less implicated in inflammation of the walls of those parts of the ear; or, on the other hand, those parts of the ear are liable to participate in inflammation originating in the membrana tympani.

To speak first of inflammation of the walls of the auditory passage. The auditory passage is lined with skin, a delicate continuation of which, or of its epidermis, forms the outer layer of the membrana tympani. In the region of the

osseous part of the auditory passage, the tegumentary lining contains embedded in it the ceruminous glands.

In inflammation of the skin and ceruminous glands there is discharge from the ear, and the wax, if any, presents itself mixed with the matter and exfoliated epidermis. Sometimes we find a continuous portion of epidermis in the form of the point of the finger of a glove, which has been exfoliated entire from both the wall of the passage and outer surface of the membrana tympani. In chronic inflammations of the auditory passage, vitiated wax mixed with exfoliated epidermis collects and forms a plug obstructing the passage. It is, however, to be remembered that the mere removal of this plug is not sufficient treatment. The surface of the skin of the passage remains red and raw, and this state requires for its treatment pencilling with a nitrate of silver solution or the application of a red precipitate ointment.

These affections of the auditory passage, it is to be observed, are very much akin to the chronic inflammations of the tarsal borders of the eyelids, including the mouths of the Meibomian glands. On the other hand, the inflammation of a furuncular character, terminating in a small abscess or boil, which occurs in the skin at the entrance of the auditory passage, is akin to hordeolum or stye. There is severe pain at the commencement, but when the abscess is opened, or bursts of itself, relief speedily ensues.

In passing now to the consideration of inflammation of the lining membrane of the cavity of the tympanum, it is to be observed that that part of the eye which is the seat of some very important ophthalmiæ is the conjunctiva—a mucous membrane investing the anterior surface of the eyeball. In the ear some of the most common causes of impairment of the hearing consists, in like manner, in the morbid condition of a mucous membrane, or rather a fibro-mucous membrane, the mucous membrane being here incorporated with the periosteum of the labyrinth—that, namely, lining the cavity of the tympanum, which, being situated on the peripheral surface of the labyrinth, bears an exactly similar anatomical relationship to it as the conjunctiva does to the eyeball.

Again, the derivative lachrymal passages, comprising puncta lachrymalia, canaliculi lachrymales, saccus lachrymalis, and ductus nasalis, which maintain a communication between the conjunctival space and the nasal cavity, are the seat of some most troublesome affections of the eye. The Eustachian tubes, or passages from the tympanic to the nasal cavities, resemble the lachrymal passages in their relationship to the nostrils, and likewise in their pathological states. But, it is to be observed, that whilst obstruction of the derivative lachrymal passages prevents the due drainage of tears and mucus from the conjunctival space into the nose, obstruction of the Eustachian tubes prevents the due admission of air into the tympanic cavities, and thus seriously interferes with the function of hearing, inasmuch as the air which fills the tympanic cavities forms an important part of the apparatus and mechanism of the ear. The morbidly thickened state of the lining membrane of the tympanic cavity which accompanies the morbid condition of the Eustachian tube, preventing the free admission of air, further contributes to the deterioration of hearing.

In the normal state, the Eustachian tubes are not exactly continuously open, but the mechanism by which the passage of the air between the nasal and tympanic cavities through them takes place is this. The guttural orifice of the Eustachian tube is not habitually wide open, but in the state of rest the outer and inner walls of the cartilaginous and membranous portion lie collapsed and in contact. By this arrangement the tube is as if provided with a valve, opening either way, but so weak as to be readily forced. In the act of deglutition, the alimentary morsel is prevented from entering the posterior nares, as you know, by the elevation of the soft palate, and the approximation of the posterior pillars of the fauces, whereby and with the help of the uvula, the upper compartment of the pharynx, with which the posterior nares communicate, is completely partitioned off from the lower compartment with which the mouth communicates, and through which the morsel is passing. Such being the case, it is clear that if during the act of deglutition the external nostrils be kept closed, the air in the nasal cavities must be subjected to pressure in consequence of the diminution of the capacity of those cavities caused by the elevation of the soft palate. The result of this is that some of the air is forced through the Eustachian tubes into the tympanic cavities and distends them.

I have said that the air in the tympanic cavities plays an important part in the performance of the function of the ear, so that in this respect the Eustachian tubes, by which the air is transmitted, have no analogy with the lachrymal passages which naturally are the channel for the drainage of tears and mucus only, though if you make a forced expiration, as if through the nostrils, keeping the nose and mouth shut, air will be found to gurgle up through the puncta lachrymalia.

To come now to the transmission of *sound* to the expansion of the *auditory* nerve, as compared with the transmission of *light* to the *retina*. The distinguishing characteristic of the parts of the eye which transmit the light is *transparency*, that of the parts of the ear which transmit sound is *vibratility*. Whilst both these physical properties are prone to be impaired or destroyed, the special nervous expansion peculiar to each organ may have its energies enfeebled or annihilated by various morbific influences; and so there is blindness in the one case and deafness in the other, against which we have to struggle.

The membrana tympani being thrown into vibration by the sonorous undulations which the air in the auditory passage has received from without, communicates undulations to the air in the tympanic cavity, which undulations again throw the membrane of the fenestra rotunda or cochlear fenestra of the labyrinth into vibration. From this vibrating membrane of the cochlear fenestra undulations are propagated to the *perilymph*, the watery fluid which fills the scalæ of the cochlea and intervenes between the walls of the rest of the osseous labyrinthic cavity and the membranous labyrinth. The membranous labyrinth, within which are the expansions of the auditory nerve, together with the viscid fluid named "endolymph" and certain calcareous concretions named "otolites," is struck by the sonorous undulations from the perilymph, and so the auditory nerve receives the impression of sound.

Whilst comparing the membrane of the cochlear fenestra with the cornea, we might compare the cavity of the cochlea with the chambers of the aqueous humour, the perilymph with the aqueous humour itself, the lamina spiralis with the iris, the helicotrema—or aperture by which the two scalæ of the cochlea communicate with each other—with the pupil, the endolymph with the vitreous humour, and the calcareous concretions with the lens. But all this only in passing.

To return to the middle ear. You have thus seen how the air in the tympanum is an important constituent of the organ of hearing. If, therefore, air is not duly received through the Eustachian tubes, and the integrity of the tympanum otherwise broken in upon by inflammation of its lining membrane, with thickening or the like, sonorous undulations are only imperfectly transmitted to the labyrinth, and so there is defective hearing, even although the internal ear be little or not at all affected.

The ossicles in the tympanic cavity—the malleus, incus, orbiculare, and stapes,—articulated together so as to form a chain extending from the membrana tympani to the fenestra ovalis of the labyrinth, and moving on each other by the action of proper muscles, have been often supposed to be the medium through which sound is transmitted from without to the internal ear; but the chain of ossicles with their muscles seems rather to serve the purpose of bracing the membrana tympani, on the one hand, and the membranes of the labyrinth, on the other, so as to adjust the ear for different degrees of sound.

The treatment which has been most commonly employed in cases of deafness from obstruction of the middle ear, is to introduce catheters from the nose into the Eustachian tubes, and to inject through them air, or stimulating vapours, or lotions, into the tympanic cavities. This local medication is not without its use if reasonably employed; but you will see, from what I have before said, that such applications do not operate with the same advantage to the ear as drops and lotions do to the eye.

Perforation of the membrana tympani in order to admit air into the tympanic cavity in cases of impervious Eustachian tubes was an operation introduced by the late Sir Astley Cooper, and much vaunted at the time. It has, however, as might have been expected from a consideration of the pathological condition in such cases, proved a useless operation at the best.

The mastoid cells, you know, communicate with the cavity of the tympanum, and perforation of the mastoid process is an operation which has been performed for the purpose of throwing injections into the tympanic cavity. The unfortunate result of the operation many years ago on the person of a physician

in Denmark, however, more perhaps than a just perception of its uselessness, brought perforation of the mastoid process into discredit, as a means of treating deafness. Of course, in cases in which there is matter in the mastoid cells, and which is pointing at the place already softened by caries, it is proper to perforate to give issue to the collection.

Lastly, it is to be observed that a connexion between the auditory nerve and the brain exists similar to that between the optic nerve and the brain. Hence, morbid processes with failure of function, similar to what are met with implicating the optic nerve and giving rise to amaurosis, we find as was to have been expected, implicating the auditory nerve and giving rise to real nervous deafness.

Clinical Lecture
ON
A CASE OF TYPHUS FEVER.

Delivered at the Middlesex Hospital, Jan. 9th, 1880,

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(Concluded from p. 153.)

THE case I have just related is a well-marked instance of typhus fever of a moderately severe type. That it is typhus fever there can be no shadow of doubt; but it was sufficiently puzzling at first sight. I do not think that even the acuteness of its onset would have negatived its being enteric fever—by far the more common of the two; for we have had cases of this latter fever with as definite a history of apparently sudden onset as this boy had. Such are the cases of so-called "ambulant typhoid," where the disease may have existed long without much marked discomfort. I might enforce this more strongly by alluding to the case of one of ourselves—happily, I have reason to believe, now proceeding surely to convalescence,—who was attacked suddenly with severe pyrexia (reaching 103·8° on the second day of the declared attack), which moderated a little towards the end of the week, when a copious rose rash appeared. Indeed, the more we know about enteric fever, the less can we rely solely for its diagnosis upon the manner of its onset. Some cases will have a continued malaise of a month's duration before any definite pyrexial phenomena appear, and such contrast markedly with the type of which I have just spoken. But if we are at a loss sometimes to discriminate between these two forms of continued fever—typhus and typhoid—at the onset, the study of the course of the pyrexia in each instance brings to light marked divergences. Contrast for the moment the two thermometric curves I have placed before you. In both, the tracing begins on or about the tenth day; in the enteric case it was not possible to be certain as to the precise day, but it was between the eighth and tenth. This chart was from the case of a child six years of age, in Murray ward from April 1st to May 21st, 1879. Neglected and ill-nourished, with a skin covered by flea-bites, but presenting at no time any typical rose spots, she passed through a somewhat severe attack of enteric fever,—diarrhœa with typical motions, bronchitis, and splenic swelling marking its course. The pyrexia took a high range, the lowest morning remission during the first five days being 102°, and the highest evening rise 104·8°. On April 5th to 6th she had a succession of baths, her temperature on being placed in them being successively 104°, 103·4°, 103·4°, 103·6°, and 103·6°. From that time—i.e., the sixteenth day—until the twentieth day the morning level was about 101°, the evening 103°; and then came the defervescence, rather more rapidly than usual, so that on the twenty-first day the normal was reached; and after that the prolonged period of convalescence was marked by a series of subnormal temperatures. The pulse-rate, which had been as high as 156 during the fever, fell to 88 and 100, but sometimes exceeded this, even when the body-heat was low. Now turn to the other case. It was late in its course when it came to us, and the pyrexia must be considered to have been at its height and to have reached this days before. The first recorded temperature—102·2°—being taken just after the boy had been having a bath, was probably not a true indication of the height it had attained. Five hours later it was 104°. How much higher it would have risen if left uncontrolled I cannot say, and you see, at any rate, the tendency it had to reach a high level, beaten down as it was by the cold bath. Temperature records are nowadays sadly complicated by reason of the employment of this never-failing antipyretic measure, whilst the days of "hyperpyrexia" are numbered, save in the case of rapidly-recurring or rapidly-vanishing fever, such as complicates local inflammations, various forms of septic poisoning, or those quasi-specific diseases, pneumonia and facial erysipelas. Indeed, in typhus fever the arguments for having recourse to this agent are less strong, perhaps, than those in favour of its use in enteric fever. But they are almost as strong, to my thinking, on the view that high fever *per se* is an element of danger. It was to control the pyrexia then, and not in the belief that we were dealing with typhus fever, that these four cold baths were given. Their effect was decidedly beneficial. *Cæteris paribus*, we can estimate pretty accurately the severity of a febrile process treated by the cold bath by the rapidity of the *after-rise* of temperature. Note that, in this case, after bath No. 1 the temperature rose 4·6° (98·8° to 104·4°) in three hours and a half; after bath No. 2 the temperature rose 1·4° (101·2° to 102·6°) in two hours, and then, after a slight fall, rose to 103°, and remained there till the third bath, after which it rose 3·6° (99·8° to 103·4°) in six hours; and, lastly, after bath No. 4, it rose 2·2° (100° to 102·2°) in five hours and a half, the comparative effects of each bath being represented in the rate of rise per hour, as 1·4°, 0·7°, 0·6°, and 0·3° respectively. Such a comparison shows fairly well that the pyrexia had already reached its height, so easily was it controlled by the bath. Then following the chart see the somewhat abrupt fall to the normal on the thirteenth and fourteenth day, shared in also by a like fall in the pulse-rate. The "crisis" here is not very striking, but it is marked enough and abrupt enough to contrast with the slower decline of enteric fever towards defervescence. The course of the pyrexia, then, proclaims in favour of typhus fever.

Now as to the *eruption*—the exanthem. Appearing, as a rule, about the fourth or fifth day, as a pale pinkish erythematous mottling, it rapidly assumes a browner colour, and, losing its hyperæmic character, it ceases to disappear on pressure, and later—from the eighth to the tenth day—it often becomes petechial. There are cases in which it never becomes petechial, and a very few where there is no eruption at all. In O'L——'s case the skin generally had a dirty, yellowish-brown mottling; and scattered about it, especially on the abdomen, were small purplish and greyish vibices. More than once—aye, many times—have these appearances been mistaken for flea-bites, and, seeing that the fever is *par excellence* a fever of the neglected and ill-cared-for, a combination of the lesions due to the parasite and those due to the fever often does occur, and adds to the difficulty. Cardanus, who wrote on this disease in 1545, describes it under the name of "morbus pulicaris," thereby indicating his own view of the resemblance, whilst at the same time he is careful to point out that some authors confound it with measles. In 1874 a female patient, aged seventeen, was admitted here with indefinite but not severe febrile symptoms, and a peculiar rash thought to be due to flea-bites. The doubtful character of the case caused the authorities to isolate her. A probationer nurse contracted the fever from this case, and died on the ninth day; a second nurse in attendance on the two foregoing also contracting the disease. It is this occasional ill-defined character of the rash, going as it does with a mild type of the fever (not the less contagious, however), that renders the diagnosis sometimes so difficult. Of late years cases have been few, and in a hospital such as ours, where means of isolation are limited, our chances of seeing many cases upon which to build up experience are but small. To study them we should by rights go to the fever hospitals, where all cases of undoubted typhus coming here are at once forwarded.

Let me now rapidly run over the leading features of the case, all of which strengthen the diagnosis of typhus fever. The unusual predominance of persistent headache and pyrexial pains in the back and limbs was striking. These pains lasted from the very onset until the time of his admission on the tenth day. They mark possibly the presence of a fever of severe type. Seldom—at least I can hardly

recall an instance myself—do we note such a prolonged continuance of these subjective phenomena after the commencement of an attack of enteric fever. So predominant were they and so marked was the hyperæsthesia, that it was almost justifiable to think the case one of acute rheumatism without articular manifestations, an event which does sometimes happen, especially in the young, explaining one kind of "growing pains," as the laity term them. But there were, added to this, great prostration and marked feebleness of pulse, showing that the disease, whatever it was, had taken firm hold on the boy, and had reduced his vitality to a low ebb.

Another very striking sign, and, I believe, an unusual one, was the dry, brown, and fissured tongue. It was like the tongue at the end of the second or in the third week of enteric fever, and it differed much from the moister cream-furred aspect usually present in typhus, except in the severer cases. But beware of putting too much trust in one sign alone. I would by no means disparage the study of the tongue; it is a valuable index, sometimes for diagnosis, often for treatment, especially as regards the administration of alcohol, and also of prognosis. It is one of the most time-honoured observations in medicine; but in our case it would not have been wise to have placed too great reliance upon this single sign. The lad had come from a crowded home, with an overworked mother as his only nurse, and a mild case of typhus was converted into a severe one by reason of neglect and ill-attention.

Then he had a tendency to diarrhœa. Although somewhat exceptional in typhus, this symptom does occur. The stools, however, differed widely in character from those of typhoidal evacuation. They were very loose, but deeply bile-stained; and although later they became paler, they became also more formed, and their colour was but in the nature of things, seeing how profoundly the function of the liver itself must be modified by the febrile state. Note also the obvious enlargement of the spleen. I remember to have heard it said—I do not know why—that splenic enlargement was the rule in enteric, the exception in typhus fever; and some stress has been laid on this as a diagnostic point. Although since then, it is true, that I cannot speak from any extended personal acquaintance with the latter disease, yet I have been assured, on good authority, and I have gathered it from reading, that there is enlargement of this organ in typhus fever also; and I accept this statement implicitly, for wherever there is high pyrexia—from whatever cause—there does occur more or less swelling of the spleen, as of liver and kidneys. One's experience of the post-mortem room suffices for this. No doubt in the prolonged pyrexia of enteric fever this swelling may attain a higher degree or may persist longer than in other pyrexiæ of briefer duration. I may add that the abdominal distension in this disease often prevents the ascertainment of this swelling during life. But I am sceptical about attaching any specificity to the swelling in the case of enteric fever, although in doing so I fear I run counter to views held by high authorities. The retention of urine, deafness, &c., marked the great degree of nervous prostration; but it is interesting that there was only very slight delirium, and that not of an active character. Lastly, the case was complicated by severe and general bronchitis, with evidence of hypostatic engorgement of the lungs. This, too, may be regarded as a measure of the intensity of the fever. A certain amount of it is almost invariably present in enteric fever, but it occurs also largely in typhus.

Therefore, whether we deal with isolated symptoms, or, what is preferable, study them all in a group, we may fitly conclude that, as against enteric fever, the reasons in favour of typhus grow strong, and I have already pointed out how the course run by the pyrexia was confirmatory of them. Absolute proof is, however, not always forthcoming. In this case it has so come to pass as to leave no shadow of doubt, and that in the fact that it has led to typhus in another patient. Typhus can only breed typhus, and by a backward look we learn the nature of the tree by its fruit. This clinching proof has happened in this wise: The nurse first set in charge of this patient, complaining of headache, was relieved from her duties. She did not take the disease itself, but conveyed it to the next patient of whom she happened to be in charge. This was a girl, debilitated by a severe attack of erysipelas of the leg, from which she was convalescing. Five days after she began to be attended by this nurse she developed well-marked typhus symptoms. She was at once transferred to the Fever Hospital, where she has done well. Now, unless overwhelming proof can be shown to the contrary, one must refuse to admit any other explanation than that we have here an instance—rare indeed in the etiology of typhus—of the transmission of the disease to a third person, the carrier of the contagion not being affected. For it is one of the best-known facts that of all contagia that of typhus is most easily rendered innocuous by free dilution. In other words, that it requires a tolerably concentrated *dose* of the poison to be received before the fever can be reproduced. The subject of the infection must have been peculiarly susceptible to typhus contagion to have been poisoned by so small a dose. As to the conveyance through the medium of a third person, I find that Dr. Murchison relates an instance almost parallel to this one, which occurred in this hospital thirteen years ago. He says: "In January, 1867, a patient in a surgical ward of the Middlesex Hospital was seized with typhus. He had been in the hospital four and a half months, and in bed all the time. There were no other cases of typhus in the same ward or on the same floor; but a nurse in attendance on a typhus patient downstairs, though in good health herself, had been in the habit of visiting this patient daily."[1]

But the incubation period was unusually brief; it was only five days, supposing that the case was infected on the very first visit of the nurse. In the majority of cases *twelve days* has been clearly shown to be the period intervening between exposure to the poison and the declared attack. The development of the poison, however, be it chemical or vital, is not strictly confined within narrow time-limits; and accordingly we find exceptions to this rule to be tolerably frequent. It has been found (Murchison) that the tendency is to a shorter rather than a longer incubative period than twelve days. Some even have been said to have been attacked instantaneously on exposure to the poisonous influence. All this is conceivable if we admit the fact that variations in the length of incubation depend upon (1st) the intensity of the poison, and (2nd) the susceptibility of the recipient. The experimental researches upon the types of septic poisoning bear this out; and in typhus fever itself it is held by good authorities that the greater the exposure to the poison, the shorter is the period of incubation. But how dilute was the dose in the case that has arisen here! Not even the medium of the contagion, the nurse in attendance, contracted the disease. So we are forced to conclude that if the period of incubation really is governed by the causes I have named, the patient in Queen ward was remarkably susceptible to its influence.[2]

To return to the case of our boy. There are a few points in the after-course of his illness worthy of note. The change wrought in him by the crisis was marvellous, not only in his aspect, but in the cleansing of his tongue, in the disappearance of bronchitis, in the restoration of appetite—all these and more, going with lowered pulse-rate and temperature. So marked was the change that I even ventured to do that which would have been almost criminal in the case of enteric fever—viz., to put him on fish diet on the sixteenth day of his illness, although, even in his case, this was a little premature for good digestion, and after two days we had for a short space to interdict the fish, in spite of his growing appetite. At the same time the administration of alcohol had been continued undiminished until a week after the crisis, when port was substituted for brandy. The alcohol was not given because the case was one of typhus, but because the feeble pulse and faint cardiac systolic sound showed that the heart was failing and required extra stimulation, and it was continued in the early convalescence because the indications of cardiac failure still persisted. The pulse indeed became abnormally slow; probably the ventricle lagged lazily in its contractions, as if it were almost too great an effort to keep up the weary round of systole. Another indication of the weakening of the ventricle, and a rather grave one, as pointing to dilatation of the cavity, was the appearance of a definite systolic murmur on January 2nd. It showed that the mitral valve was incompetent, probably from stretching of its orifice or weakening of its muscles; but I am glad to say that it has now disappeared. With so slow a pulse as the boy had, digitalis was not given; we trusted rather to improved nutrition affecting the heart-muscle. That the heart-muscle, like other muscles, undergoes degenerative changes in fevers has long been known. The late Dr. Stokes was the first to

[1] Continued Fevers, 2nd ed., p. 89.

[2] In the case of typhus contracted here in June, 1874, the nurse was attacked just *six* days after assisting the patient to bed on her admission into the hospital.

draw marked attention to this and to its clinical indications. It is in full knowledge of this, and of its gravity, that it behoves us always to watch closely for these signs of cardiac failure, in order that we may not withhold the administration of alcohol when it is most urgently needed.

But little remains to be said. A veil of mystery hangs over the origin of this case. We know not when the boy contracted his fever; and it is curious, to say the least, that, so far as we know, no one in the house, nor in the room he shared with six others, should have taken the disease, seeing that for ten days he was lying there sick with it, and for the latter part of that time had reached the stage when it is most contagious. We do know that the fever was prevalent—to a sufficient extent, at least, to cause the sanitary officers to call attention to it—in the district whence he came; and it may be that this and another case of which we have since heard are but the vanguard of an epidemic. Of late years typhus fever has not been very prevalent in London. In this hospital (where, however, only doubtful cases are admitted, and even then sometimes transferred to the Fever Hospital) there was one case admitted or treated in 1873, six in 1874, none in 1875 or 1876, one in 1877, none in 1878, and one in 1879. But in London, as in all large cities, typhus is endemic; and although sanitarians do all they can, the conditions for the development and propagation of the fever cannot but exist in their midst. Especially is this the case with London, which annually receives an ever-increasing influx of vagrants from the country, seeking and not finding employment in the metropolis. Overcrowding, destitution, semi-starvation, and uncleanliness—these are the conditions that have bred typhus fever in the past; they abound on all sides in London at the present; and if typhus become epidemic, as it is like enough to do, it will require the utmost vigilance on the part of the sanitary authorities to limit its spread.

P.S., Feb. 4th, 1880.—Since the publication of the first part of this lecture I have learnt from Mr. Lovett, medical officer of health for the St. Giles district, that the fears above expressed have fortunately, so far, not been verified. He writes: "I am happy to inform you that at the present time no typhus (to the best of my knowledge) exists in the district. From the beginning of August to the end of November a serious outbreak occurred amongst our people, the full particulars of which you will find in a paper which I read before the Society of Medical Officers of Health, and reported at length in THE LANCET of 29th November last. The 'notification' you mention, received by your resident medical officer, was sent by the Sanitary Committee at my suggestion, because I discovered that several patients from this district had been received into one of the metropolitan hospitals, suffering from typhus fever, and no information given to me or my sanitary authorities, so that the dwellings of those patients remained infected,—for the spread of the disease."

THE ADVANCES IN SURGERY DURING THE PAST TWENTY YEARS.

The Presidential Address of the Border Counties Branch of the British Medical Association, delivered July 25th, 1879,

BY RODERICK MACLAREN, M.D.,
SURGEON TO THE CUMBERLAND INFIRMARY.

(Continued from p. 161.)

CONTINUOUS tension is an agency which has received application to a great extent of late years. It can be effected in two ways—by means of india-rubber or by a weight. Its power is very great. A piece of taut india-rubber will cut through any tissue; a few pounds hung to a limb will weary out the strongest muscles; an india-rubber bandage wrapped tightly round a limb will empty its blood-vessels entirely, and then an india-rubber cord fastened where this stops will keep them empty, enabling operations to be performed with the precision of the dissecting-room, and with entire absence of hæmorrhage. A limb thus rendered bloodless will keep alive for a couple of hours at least, and aneurisms have been successfully treated by emptying all bloodvessels except the sac, and leaving the limb in this condition for some time. The elastic ligature seems to be rather a surgical curiosity than of much practical use. If anyone chooses to do it, he can cut off breasts, tumours of some kinds, and piles, or he can lay open sinuses with it. But I fancy very few do choose to do so; it involves a painful and tedious process. Occasionally an elastic band is useful for removing a piece of dead bone from the interior of a case of new bone; if the india-rubber is fastened to the sequestrum, and then made tense, it will cause it to cut its way out in a few days. So, too, if a silk ligature has included a piece of tissue as well as the vessel, and does not loosen and come away at the usual time, two or three ounces tied to it, and allowed to hang over the side of the bed, speedily sets it free.

The treatment of many fractures has been improved by this means. The cases in which it is useful are: first, those in which the position prevents a mechanical lock—as, for example, the neck of the thigh-bone; secondly, those cases in which a similar result occurs from the obliquity of the fracture. In both instances the great displacing cause is muscular action; and if a weight of sufficient power is attached to the limb it will so weary and exhaust the muscles as to render their tonicity inert. That this is its mode of action is shown by the fact that a weight may take several days to reduce a riding fragment, which would not be the case if it simply pulled the bone straight. The long splint is now largely superseded by extension for fractures of the thigh-bone, with the result that appreciable shortening is an uncommon result. With fractures of the tibia, of the humerus, and of the radius and ulna, where reduction and splints fail to keep the bones in a straight position, extension will usually do so. After excision of the knee, by far the best retentive apparatus is a weight attached to the leg, and box splints to prevent lateral movement. The extension keeps the rough surfaces of bone apart, and obviates pain and starting. So also with inflamed joints, the separation of the surfaces and the securing of muscular rest are generally attended with the best possible results, present relief of pain and gradual subsidence of the disease. In the treatment of deformities tension is now largely used: a muscle or muscular group is more or less paralysed or injured, so that its action is impaired, consequently the opposing muscles are freed from the usual check, and the limb is pulled in their direction only. If no treatment be adopted a deformity results, which in time becomes permanent, so that it cannot be rectified without division of structure, and most cases which come under observation have reached this condition. Now what tension does in those cases is to imitate the natural tonic contraction of the effeebled muscles: an india-rubber cord is made to pull on two points—one as near the origin, the other as near the insertion, of these muscles as possible; in early cases without previous tenotomy, in chronic cases after it. The action is not only palliative, it is curative. When a muscle is partially paralysed it helps it in its work and gives it rest; when its tendon is ruptured, it also approximates the ends. With fractured patella, which is essentially a ruptured tendon, the results of this method of treatment compare most favourably with all other plans except Malgaigne's hooks, and it is free from the undoubted risks which attend these. In some instances the displacing cause, instead of being muscular, is mechanical, as in flat-foot, where it is the weight of the body. Something—any too much standing, or an injury—incapacitates the tibialis anticus, the arch of the foot is not supported as it ought to be, and the scaphoid sinks, rendering the inner border of the foot straight or convex, instead of concave. In slight and recent cases, if the foot gets rest, the muscles recover their tone, and the parts resume their natural form; in chronic and aggravated cases rest will not suffice, but a stout rubber cord, having its upper end fastened just below the head of the tibia and its lower end under the instep, acts exactly in the direction of the feeble muscle.

It sometimes happens that the flaps of an amputation do not unite speedily, but retract, threatening to expose, or actually exposing, the bone; here again extension proves of the greatest service by pulling the flaps forward and keeping them so until union occurs.

Experiments on animals have shown that bone grows by continuous deposits from its investing membrane, and that if the bone itself be removed the periosteum can reproduce it, the result closely resembling the original. Further, it is proved that it is in the young animal that this power is most active; in the aged it is altogether lost. Clinical observation confirms the existence of this reproductive power. I have fortunately the opportunity of showing you marked

examples. You have before you three casts, all from patients at present under my care in the Cumberland Infirmary. The first of these is the leg of a woman aged fifty-four. When two years old she had acute inflammation of the tibial periosteum, and the whole tibia eventually came out, the process extending over many years. The leg is curved like a scimitar, and has frequently given her trouble from ulceration; but still it has been a fairly useful limb, and has done much hard work; it is about an inch and a half shorter than the other limb. The next one has, as you see, two tibias—one outside, the other inside. This was the condition on the patient's admission. The story was that three years ago there was an acute inflammation of the limb, resulting in death of the bone, while the periosteum retained its vitality; openings formed in front, which allowed first pus and then the bone to pass out; meanwhile a new tibia was being formed behind. The old tibia was quite detached, and was taken away with the finger and thumb. The new tibia is a stout, serviceable, and not unshapely bone. On such clinical experiences subperiosteal surgery rests. The third cast is of a limb from which I removed the whole shaft of the tibia four months ago in consequence of its death by acute periostitis of thirty days' duration; in nine weeks a good tibia had replaced the old one, and it is still developing; the limb is equal in length to the other. Contrasting the last case with the other two shows forcibly the gain in operating. Compare it with the first, and you see how much better a limb is left, and it will still improve; compare it with the second, and you notice the great gain in time, for, while the one occupied three years, the other was healed in three months, and I believe that within six months of the operation the patient will be able to use the limb. Thus art improves on, while she imitates nature. Not only in cases of necrosis, but also with extensive caries, subperiosteal surgery gives gratifying results. I show you here a photograph and specimen, where the upper third of the humerus was taken away, and of this two-thirds was reproduced, leaving a limb more useful than I have ever seen by the ordinary method of excision.[1] By keeping underneath the periosteum in performing excisions several other objects are gained: there is the least possible injury to soft parts, ligaments and attachments of muscles are not destroyed, and there is the least risk of hæmorrhage; the result more closely resembles the original joint than by the ordinary method. I have seen, for example, after an excision of the elbow, a new olecranon develop when its covering had been left. The usefulness of the hand is much increased by sparing this membrane in excision of the wrist. I have seen the limb shortened by only about an inch from the elbow to the finger-tip, though the removed bone represented a much larger portion of the limb; and not only so, but the wrist remained movable—an immense gain over a rigid joint. In excisions of the os calcis it is on record that it has been entirely renewed, making a good heel. It is noteworthy that, though the reproductive power of the periosteum was determined far more than twenty years ago, it is only recently that this knowledge has borne fruit in an improvement in practice. The same fact constantly meets us—work done from purely scientific motives, and with the sole object of increasing knowledge, bearing a rich harvest in improved methods of treating, or even of avoiding, disease. This periosteal reproductive power becomes of service in many ways; for example, in trephining, if the membrane is first reflected, instead of the opening being closed by soft tissue, it will be filled by bone. In removing a case of new bone round a sequestrum, for the sake of getting it out, the sparing of the periosteum will give a stronger bone as a result than if it be taken away. I have seen a whole metacarpal bone reproduced, after its removal for caries, thus saving the finger which it supported. In certain cases it is useful to transplant periosteum, as in forming a new nose from the brow.

I regard subperiosteal surgery as the very highest development which surgery has yet reached; there is nothing equal to it in all else that we can do. That the main support of a limb, that which constitutes it a limb, which gives attachment to all its muscles, can be taken out, leaving a moluscous mass of soft tissues, and that in a few weeks this is replaced by a bone which in form and function is all that the original one was, really approaches a creative art.

In the treatment of caries of bones a change has come over practice. Amputation and even excision are less common than they used to be, and simply the entire removal of all diseased bone much more the rule. Antiseptic surgery has helped to this, but even when antiseptic is not available, it is now known that scraping away the soft bone with great freedom is followed by the best possible results. This is specially the case with caries invading the bones of the foot. It has been believed that opening the joints of the tarsus was a bar to free removal of carious bone; but if it be done with an unsparing hand, with considerable disregard of anatomy, and if a free and effectual drain be provided, the disease usually stops, the removed bone is replaced, and a limb of much usefulness left. It is not the opening of a joint which does harm, it is pent-up discharge in it, and putrefaction lurking in its remote corners; therefore the essential conditions of success are a free opening, good drainage, and the avoidance of putridity as much as possible. Of course there still are limbs which require removal from their carious bones, and there are still bones and joints which require excision from this same cause, but they are often neglected cases, and are, I think, becoming fewer. I am convinced, moreover, that limbs are less frequently amputated for joint disease than they were twenty years ago owing to the greater frequency of excisions, and also to the greater appreciation of the good results which follow long-continued rest with extension and pressure. This is greatly due to the establishment of the fact that far more diseases of joints than were supposed (in fact some surgeons say all chronic inflammatory cases) date from a local injury. So local treatment takes a more prominent place than the general measures which were appropriate when a strumous diathesis was supposed to be at the root of almost all of them.

Coming now to injuries to bones and joints, the only change which remains to be mentioned is in the reduction of dislocation of the hip. Instead of powerful pulleys and great extending force we have now a few simple manipulations to use, slipping the head of the femur back into its locket.

In the treatment of deformities of bone, whether the results of disease or injury, subcutaneous osteotomy does what tenotomy has done for deformities of the soft parts. A chisel or narrow-bladed saw divides the bone, and retention in a straight position completes the rectification. It is applicable to knock-knee, bow-legs, anchylosed hip-joint, and misplaced fracture; it involves no more risk than attends a broken leg. I question if the chisel operation will stand the test of time; I think the saw will displace it, from having the advantages of smaller external incision, of precision, and of simplicity. The forcible breaking up of adhesions in fibrous anchylosis of joints has grown in favour of late years. Considering the great amount of violence required, it is singularly free from untoward results.

Increasing boldness in the use of the knife, scissors, and écraseur is the change in the treatment of cancers and tumours which I have to bring under your notice. The cancerous tongue, rectum, or uterus has been removed with freedom and with the result of relieving pain and somewhat prolonging life. Tumours are taken away from positions which require long and careful dissection, and the cavities of the body no longer protect them from removal.

In the surgery of bloodvessels we have had acupressure and torsion added to our means of controlling hæmorrhage. The ligature of bleeding veins in stumps is now a regular practice, replacing a superstitious dread of interfering with these vessels. Aneurisms, which were formerly beyond the reach of treatment, are now amenable to it: thus abdominal aneurisms have been cured by rapid pressure on the aorta at the level of the epigastrium; galvano-puncture has arrested thoracic aneurisms, and there seems good reason to believe that double distal ligature will cure many cases of aortic and innominate aneurism. The use of an absorbable animal tissue, such as catgut or tendon, has diminished the risk of secondary hæmorrhage in these operations, for a compression of the vessel is effected which does not cut through its inner coats, and thus leaves the continuous integrity of the vessel unimpaired. The various forms of rapid pressure by the fingers, tourniquet, or elastic cord, have reduced considerably the number of cases in which the Hunterian operation is necessary. They all act in a similar manner; they slow the current of blood in the sac, so that coagulation of its contents occurs. Light has been thrown on the causation of aneurism; the starting-point is an inflammatory softening, allowing the blood-pressure to produce dilatation there. Very recently the sphygmograph has

[1] THE LANCET, June 7th, 1873.

helped the diagnosis between the various kinds of thoracic aneurisms. The observations published are not yet very numerous, but in all probability the diminution of pulse-waves in the vessel beyond an aneurism, when compared with the recorded impulse in other vessels of the same individual, will indicate with more certainty than any means hitherto at our command where the aneurism springs from. The sac, acting as a governor or regulator, allows the impulse to be expended, and converts the normal intermittent into a continuous blood-current.

(To be concluded.)

THE ALKALINE, SALICIN, AND SALICYLATE OF SODA TREATMENT OF ACUTE RHEUMATISM.

BY ROBERT SINCLAIR, M.D.,

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THE idea first suggested by Prout that lactic acid is the *materies morbi* of rheumatism has been the basis of much of the modern treatment. What actually is the rheumatic poison remains to be proved, though the general success of the alkaline treatment, and the recent observations of Drs. Kuely and Balthazar Foster[1] lend a very high probability to Prout's theory, in spite of the failure of the unscientific experiments of Dr. Richardson. That the results of the alkaline method, which does not exclude the use of other well-selected drugs in combination with alkalies, have been very satisfactory, no one who examines the figures placed on record can deny. That in many hands the alkaline method has proved a miserable failure is equally certain. But I shall probably not be very far from the truth if I suggest that the latter result has been largely owing to a too implicit faith in the efficacy of the *vis medicatrix naturæ*, and a prevailing scepticism of the value of drugs, with the practical result of prescribing remedies in an exceedingly slipshod fashion.

As the physiological action of alkalies gives us some very distinct clues to their probable effects in disease, and some equally decided hints of the dangers of their imprudent use, it may be well to premise a consideration of their application to the treatment of rheumatic fever, by a brief *résumé* of their effects on the healthy organism.

The salts of potash and soda have a strong affinity for water and a high diffusive power, they increase the alkalinity of the blood, neutralise acids in the stomach and intestines, and render the urine alkaline; they promote oxidation, and are rapidly eliminated by the kidneys and intestines. The neutral salts are rapidly converted into alkaline carbonates in the system. Potash salts in large doses powerfully depress the circulation and the spinal cord. The nitrate of potash, if freely given and not well diluted, causes inflammation of the gastro-intestinal tract. If long continued in large doses, the salts of potash and soda cause anæmia and wasting of the tissues. "The soda salts have none of the depressing action on the heart which we have seen to be possessed by potash."[2]

The alkaline carbonates and vegetable salts have been administered with the view of protecting the tissues from the rheumatic poison, by neutralising and eliminating it, as well as for the purpose of producing a sedative action on the circulation and increasing the tissue metamorphosis and chemical changes.

So many plans of administering alkalies in rheumatism have been tried that it would be impossible, even were it desirable, to describe them all. Some practitioners have erred in giving too small doses; some in continuing alkaline medication over absurdly long periods of time; and very many have committed the no less serious error of prescribing these remedies with a total disregard for method. Dr. Fuller's directions, in his late writings, are so clear that no apology is needed for bringing before the profession a short account of what he regarded as the best mode of treating a case of acute rheumatism. Believing that potash and soda have somewhat different actions, and that the free and neutral salts have also different actions, all of which are desirable, his usual plan was to administer the neutral salts of *both*, along with a certain preparation of free carbonate of one of them. "A favourite formula is the following: half a drachm or two scruples of the acetate of potash, together with a drachm and a half of bicarbonate of soda, dissolved in three or four ounces of water, rendered effervescent by the addition of half a drachm or two scruples of citric acid, or one ounce or an ounce and a half of lemon-juice. The result is the administration of acetate of potash and citrate of soda, with about half a drachm of uncombined bicarbonate of soda. If the bowels are torpid I vary the form of this draught by prescribing half a drachm or two scruples of potassio-tartrate of soda instead of the acetate of potash, and tartaric acid instead of citric acid."[3] The above draught was repeated every three or four hours, according to circumstances, till alkaline urine was produced—a result that was usually accomplished in twenty-four hours. If the urine remained acid for a longer period the cause was usually to be found in constipation, which was met by appropriate treatment. On the production of alkaline urine the draught was repeated at intervals of six hours, and afterwards twice in the day. "If that dose suffices to keep the water alkaline for two days more, quinine or bark is given in combination with half or less than half of the alkali contained in the former draught; and as the tongue clears and the symptoms subside, the quantity of alkali is cautiously diminished until a simple quinine draught is taken. Meanwhile, when the tongue has cleaned satisfactorily, a little fish or meat is allowed, in addition to the beef-tea or broth, to which the diet had been hitherto restricted. Such is the treatment I would have you pursue in rheumatic fever. Its success is sufficiently attested by its results."[4]

What are the results to which Dr. Fuller here and elsewhere in his papers refers with so much pride and satisfaction? Prompt relief from the agony of rheumatic pains; rapid recovery of his patients; a sound heart at the end of the illness. In 116 consecutive cases, spread over a period of six years, the average residence in hospital was 20·1 days. If we include 28 cases in which pericarditis existed on admission, the average residence was the remarkably short period of 22·2 days. But here is the most startling fact of all. He treated 439 hospital and private cases without a single death, and with only 9 cardiac complications, 6 of which appeared within twenty-four hours of the commencement of treatment. Contrast these figures for a moment with the 114 instances of cardiac inflammation in 246 cases of acute rheumatism treated on other plans in St. George's Hospital during Dr. Fuller's registrarship. "Nor are the results of our experience at St. George's inconsistent with those of other observers. Dr. Latham at St. Bartholomew's, and Drs. Basham, Wm. Budd, Taylor, and others, have arrived at nearly the same conclusions."[5] Contrast Fuller's results again with Sibson's cardiac inflammations in 50 per cent. of his cases under the do-nothing treatment, and the conclusion is irresistible that the profession has committed a grave error in drifting away from a well-tried system, and seeking vainly for anchorage in shoals and quicksands.

But it may be quite legitimately asked, Have competent judges recorded results at all similar to Fuller's? Unquestionably they have. In Dr. Aitken's experience the pulse has generally been "tranquillised within forty-eight hours from the commencement of treatment."[6] But he very properly reminds us that "to be effective the remedy must be carried out with energy and perseverance."[7] Dr. Austin Flint, whose admirable work is an indispensable part of every physician's library, says that "it can hardly be doubted that the alkaline treatment is to be considered as an important improvement in practical medicine. In addition to the evidence of its positive efficacy, it has the negative merit of not doing harm if it fail to do good."[8]

The *Dublin Quarterly Journal* for May, 1869, contains the opinions of a number of eminent Dublin physicians regarding the alkaline treatment. Unqualified approval of its results is

[1] Clinical Medicine, by Balthazar Foster, M.D., pp. 143-157.
[2] A Guide to Therapeutics, by R. Farquharson, M.D., &c., p. 104.
[3] The Alkaline Treatment of Rheumatic Fever, by Henry William Fuller, M.D. Practitioner, March, 1869.
[4] Ibid.
[5] Ibid.
[6] The Science and Practice of Medicine, by Wm. Aitken, M.D., vol. ii., p. 33.
[7] Ibid., p. 34.
[8] The Principles and Practice of Medicine, by Austin Flint, M.D., p. 967.

recorded by Drs. Samuel Gordon, Henry H. Head, Hudson, Henry Kennedy, Lyons, Wm. Moore, and Charles H. Robinson. Dr. Hayden, while satisfied of its good results in relieving pain, did not feel himself justified in saying that even full doses of alkalies "confer certain immunity from cardiac complications." Dr. Freke was "strongly of opinion that, although we can mitigate symptoms, we at present know of no means whereby we can cut short the disease, or with any approach to certainty reduce its duration." Dr. Charles Benson was in favour of a mixed plan of treatment, which embraced alkalies, digitalis, colchicum, and opium. From this remark it will be readily inferred that Dr. Benson was not an exclusive disciple of the school of Wright and Fuller. More than this, he disapproved of their liberal doses of alkalies. He found such a plan of medication "too lowering for the citizens of Dublin."

Whether, or in what respects, the constitutions of the inhabitants of the Irish metropolis differ from those possessed by mankind generally, is apart from the scope of this paper. The main interest, at present, of this compendious criticism centres in the fact that it contains the only accusation, except, of course, that of failure in certain cases, that has been brought against the alkaline method, and if the objection were inherent in the system it would be one of no small consequence. But it is, in fact, less real than it seems. Large doses of alkalies, continued over long periods, will, doubtless, cause anæmia and emaciation. But neither Dr. Fuller nor any other judicious exponent of the alkaline method ever suggested such a course, nor does the disease demand it, as a rule, if properly treated from the first. To begin with, no doubt the patient must be saturated with alkalies; but it is precisely one of the merits claimed for the system that this early saturation, this vigorous initial onslaught, so to speak, by effecting a prompt and powerful impression, enables the physician rapidly to diminish, and, in a short time, to entirely omit, the use of the drugs. If Dr. Fuller's directions are carefully and intelligently followed, a very temporary depression—not to be compared for a moment with that frequently caused by the usual doses of salicylate of soda—is the only annoyance that need be feared. The remarkable case related by Professor Reid, of Belfast, will be in the recollection of many members of the profession as an instance of what alkalies *may* do if used with insufficient caution. The case was that of a youth, sixteen years of age, living in the midst of comfort, who, while under a mixed alkaline treatment for acute rheumatism, became affected with a series of alarming scorbutic symptoms, which Professor Reid attributed to the irritation of the system by some twelve ounces of Rochelle salts. This circumstance "should not," Dr. Reid very wisely says, "cause us to abandon the administration of alkalies during the treatment of acute rheumatism, but only inculcates the necessity of our insuring their non-retention in too large amount in the system, by a combination of purgatives with them."[9]

This commentary may be appropriately terminated by placing together some of the statistical results arrived at by a few eminent physicians who have fairly tried the alkaline treatment. Dr. Furnivall had no cardiac complications in about 50 cases; Dr. Chambers had 9 in 174 cases; Dr. Garrod, in 51 consecutive cases, had no complications after the exhibition of alkalies for forty-eight hours; Dr. Dickinson treated 48 cases with one cardiac complication, while he had 35 such in 113 cases otherwise treated; Dr. Senator had cardiac complications twice in 34 cases. In 22 cases treated otherwise they occurred four times. The average duration under treatment in Dr. Garrod's male cases was 6·2 days, in his female cases it was 7·3 days.

SALICIN,

the active principle of willow bark, is a non-officinal drug with tonic properties. From time to time it has been tried in the treatment of ague and neuralgia, but with, on the whole, little success. Under the influence of oxidising agents it is "converted into salicylol or salicylous acid ($C_7H_6O_2$); this is identical with the oil of Spiræa ulmaria, and exhales the same peculiar odour."[10]

For this addition to our remedies for rheumatism we are indebted to Dr. Maclagan of London, and lately of Dundee. Several causes contributed to arrest the attention of the reader of Dr. Maclagan's first paper on the subject in THE LANCET of March 4th and 11th, 1876. Among these may be mentioned his rejection of the usual comprehensive etiology of rheumatic fever in favour of an exclusively miasmatic one, his industrious search for a remedy suited to his theory, his energetic application of salicin when its use was decided on, the good results obtained, and his somewhat hasty generalisations.

The number of cases published in support of his views was eight, seven of which were cases of acute and subacute rheumatism, and one of chronic rheumatism. The quantity of salicin administered in twenty-four hours varied from 72 to 180 grains. In a later paper (THE LANCET, Oct. 28th, 1876) he advocated the use of quantities varying from 120 to 240 grains daily. In every one of Dr. Maclagan's cases the relief of pain and the reduction of temperature were promptly and permanently produced, and a rapid convalescence completed the agreeable picture. The publication of these results naturally led to a tolerably extensive trial of the drug, the record of which is scattered through the medical periodicals of the last three years. The search that has been made in these for carefully-recorded experiences has led to the discovery of two classes of cases quite incapable of proving anything except the simplicity or carelessness of the writers. One class consists of isolated successes, the other of decided failures, probably due in a large measure to quite inadequate dosage. Dr. Maclagan very properly says that "to give thirty to sixty grains per diem is to do justice neither to the patient nor the remedy," and he justly insists on full and frequent doses as the only means of estimating its value. To which I may add a caution against the too hasty abandonment of the drug when improvement becomes manifest. The dose should be gradually reduced, and the drug completely omitted only after a week's complete freedom from pain and elevation of temperature. Sufficient evidence has been forthcoming, however, to show that in many cases salicin is a valuable remedy, though it has hardly fulfilled the high hopes of its introducer. At this date we would probably have been in possession of the results of many extended trials, but for two causes—the high price of salicin and the almost simultaneous introduction of salicylic acid.

Unfortunately, the experience of trustworthy observers has not confirmed all Dr. Maclagan's important conclusions. He assured us that "salicin does not cause troublesome symptoms; that its beneficial action is generally apparent within twenty-four, always within forty-eight hours; that, given sufficiently early and in sufficient doses, salicin prevents cardiac complications."[11] Every one of these dicta has been contradicted. Headache, giddiness, and tinnitus aurium have been recorded as unpleasant effects. In spite of the early and free administration of salicin, the course of the disease has, in certain cases, run unchecked, and has carried in its train pericarditis, endocarditis, pneumonia, pleurisy, and fatal hyperpyrexia. These occurrences are doubtless exceptional. But it may be quite reasonably argued that they are exceptional under many other systems. It is well for us all to know that they *may* occur during the use of salicin, and that they have been recorded by men of the stamp of Dr. Curnow of King's College, Dr. Sturges of the Westminster Hospital, and the able physicians of the Leeds General Infirmary.

Without going into the question at issue between Dr. Senator and Dr. Maclagan as to the changes that occur in the body after the administration of salicin and salicylic acid, and which will be found fully discussed in THE LANCET of June 21st, July 19th, and August 2nd, 1879, it may be well to state that Dr. Maclagan's original views of the *therapeutic*, as distinguished from the purely *chemical*, effects of these drugs have been strengthened by his subsequent experience. He is convinced now, more than ever, that salicin is superior to salicylic acid, inasmuch as the effects of the former are tonic, those of the latter depressing. Increasing experience has taught him that salicin is the safer drug of the two, and that it should be given in larger doses than he recommended at first. He now administers thirty grains every hour till an ounce has been consumed, when the patient is usually free from pain and fever. Another ounce is then given, divided into thirty-grain doses, every two or three hours; and a third ounce, divided similarly, three times a day, to prevent relapse. This total quantity of three ounces Dr. Maclagan finds is usually sufficient to effect a cure. But the weak point in his argument is the absence of statistics on a sufficient scale.

[9] Dublin Hospital Gazette, June 15th, 1861, p. 178.
[10] The Essentials of Materia Medica and Therapeutics, by A. B. Garrod, M.D., F.R.S. Third edition, p. 316.
[11] THE LANCET, October 28th, 1876.

The only group of cases of any value which he has ever published is the group of eight cases in the March numbers of THE LANCET in 1876; and these are obviously too few for comparison with the statistics of other systems.

My trial of salicin has been too limited for statistical purposes, and therefore I need not tabulate my results; but a very short experience served to dispel the illusory hopes with which I began the use of the drug. I have had successes, or what seemed such, and I have had failures. The same has happened with every remedy hitherto proposed for rheumatism. Salicin has not, in my experience, caused unpleasant symptoms to anything like the extent of salicylate of soda. In two cases only have I encountered disagreeable effects. In one headache and sleeplessness, and in the other headache and delirium, compelled me to omit its use. My simple continued cases have, as a rule, done well under salicin. In a case of puerperal rheumatism, not long ago, the friends of the patient and I were much impressed with the rapid recovery. But I have had failures, and these most notably in my relapsing cases. Of three relapsing cases treated with full doses of salicin—one was thirty-three days in hospital; one was fifty-nine days, and had pleurisy; and one was fifty-nine days without complication. In two instances I have seen pericarditis.

The relapsing case last mentioned is so instructive as a failure that it is well worth placing on record. The patient, a healthy male, aged thirty-three, was admitted, under my care, at the infirmary, on the seventh day of an attack of acute rheumatism. From this date, March 31st last, till the 21st of April, the quantity given varied from two to six drachms daily. In these twenty-one days the patient swallowed the large quantity of ten ounces of salicin, and with, I regret to say, no perceptible influence on the course of the malady. On several occasions, it is true, temporary improvement occurred. But, while still taking undiminished doses, new joints and muscles were repeatedly attacked; and, on the twenty-first day of treatment, it was impossible to say that the man was any better than on admission. It was then decided to give salicylate of soda a trial, in similar doses. The result of this was not more satisfactory. Final cessation of pain and a normal evening temperature were not obtained for three weeks longer. That is to say, the patient was seven weeks ill, and six weeks under the influence of our fashionable remedies before he could be pronounced convalescent. It cannot be averred that the dosage here was inadequate. Still less can it be said that conspicuous success attended the efforts of the physician.

Last winter I suffered from an attack of relapsing, subacute rheumatism, after a suppurating tonsillitis; and I employed both salicin and salicylate of soda, but at different periods of the disease. My case was hardly a fair test of the power of either drug in checking the course of the malady, as I was frequently at work when a temporary diminution of pain allowed me the use of my limbs. But still my experience taught me something which may be of a little value as a contribution to practical therapeutics. Both drugs relieved the pain, tenderness, and swelling, when frequently repeated in full doses. But the taste of the salicylate was to me disagreeably sweet and sickening, and a few twenty-grain doses caused copious perspirations, disinclination for food, cardiac depression, singing noises in the ears, and a feeling of depression that was almost unendurable. On the advice of Dr. Maclagan, whose kindness I can never forget, I then took salicin. Under its use the pulse and digestion improved, the disagreeable symptoms disappeared, and the pain was more rapidly relieved. The pleasant, bitter taste of salicin was itself an agreeable change from the horrible sweetness of the salicylate of soda. Neither drug had any perceptible effect on the fever or joint affection, except when taken in scruple or half-drachm doses every hour for from six to twelve consecutive hours. Half an ounce was a very ordinary amount in twenty-four hours. On one day I took no less than an ounce of salicin, with decided benefit. After more than a month's active medication the disease showed a tendency to become chronic—at least it was judged so,—and the outlook was by no means cheerful. This result was doubtless due more to frequent exposure in very bad weather than to any fault in the therapeutics. The salicin was continued in smaller doses; large quantities of sulphur were applied to the affected joints and muscles; the diet was made more generous; a few glasses of particularly fine old port were taken daily; and in little more than a week the pain and stiffness took their departure, and have not returned since.

A time of sickness is often a time of good resolutions. I formed one resolution during my illness—namely, that, if it should ever be my evil fortune to suffer from a similar attack, I shall bargain with my medical friends on no account to torture me with salicylate of soda.

(To be concluded.)

A CASE OF ABSCESS OF THE KIDNEY, IN WHICH NEPHROTOMY, WITH SUBSEQUENT FREE DRAINAGE, WAS ATTENDED WITH SATISFACTORY RESULTS.

BY CHAUNCY PUZEY,
SURGEON, NORTHERN HOSPITAL, LIVERPOOL.

THE case here recorded is one in which long-continued stricture of the urethra, with resulting chronic retention and cystitis, was followed by suppuration in the kidney. As my space must be limited, I will confine my remarks mainly to the latter feature of the case, merely premising that the subject was a coloured seaman, forty years of age; that he had suffered from stricture of the urethra for more than twelve years; and that he had, previous to his admission into the Northern Hospital, undergone various operative measures, including, I believe, internal urethrotomy and perineal section.

The patient first came under my observation on Aug. 12th, 1878; at which time he was unable to pass any urine by the penis, but every fifteen or twenty minutes he was out of bed straining an ounce or two of thick ammoniacal urine (mixed with pus, mucus, and blood) through a very small opening in the perineum. I did a perineal section, and, having passed a full-sized elastic catheter through the penis into the bladder, was enabled to keep up constant syphon drainage, by means of a long india-rubber tube carried from the catheter to a vessel containing some carbolised fluid and placed under the bed. By this means, combined with frequent irrigation of the bladder with warm weakly-carbolised water, and the usual general treatment of cystitis, rapid improvement took place, and the patient's health steadily progressed towards recovery; but after a time it was observed that, although the man seemed in fairly good health, he frequently suffered from pain in the right loin and groin, and that although the urine was now quite sweet, clear, and of normal acidity, it frequently contained a quantity of thick creamy pus, which, from its appearance, could not be due to cystitis. It should be noted that at this time he could pass a full stream of urine without the slightest difficulty, although the perineal fistula still remained.

He was sent to the Convalescent Hospital at Woolton, and remained there some weeks; but the weather was cold, and he did not, in consequence, reap much benefit from the change.

On Jan. 19th, 1879, he was readmitted into the Northern Hospital, and a few days later his condition was thus noted: "He has a weary, anxious look; complains of pain in the right lumbar region, the pain occasionally shooting down to the right testicle, and along the inner side of the thigh. There is deep-seated tenderness in the neighbourhood of the right kidney; he has occasional slight rigors, followed by rise of temperature in the evening, and there is frequently a deposit of pus in his otherwise healthy urine." These symptoms gradually became aggravated, and a deep-seated but distinct swelling could be made out in the region of the right kidney anteriorly. In the loin there was some apparent fulness, but it was questionable whether this was not due to muscular rigidity, the patient constantly bending his body to the right, evidently to take off pressure from the diseased kidney. Gradually it became evident that there was a distinct relation between the size of the swelling, the distress of the patient, and the amount of pus in the urine. So marked was this that, after a while, a glance at the temperature chart, or even at the man's face, would tell us whether there had been a free discharge of pus; or, if we first looked at the glass vessel containing the last twenty-four hours' urine, we could anticipate the state of the patient. Thus, one day, the temperature would be found

high, the tumour distinct, and the urine almost normal, the patient at the same time suffering much distress; next day he would be much better, with a normal temperature, and several ounces of pus would be found lying at the bottom of the glass measure full of urine.

There could, then, be little doubt that the right kidney was distended with pus; careful observations made by myself and colleagues showed pretty clearly that the left kidney was healthy, and it became evident that the only way to prevent death from pain and exhaustion was the free evacuation of the swelling. The man was willing to submit to any operation, and it was decided that the kidney should be cut down upon through the right loin; that if perinephritic suppuration was found, and the kidney could be enucleated, that *that* should be done; but that if (which seemed most probable) the pus was contained altogether in the kidney, and that organ was firmly fixed by adhesions, then a free opening into the kidney, followed by drainage, would be the only alternative.

Therefore, on April 2nd the patient was chloroformed, and, with full antiseptic precautions, the kidney was cut down upon in the manner suggested by Mr. Bryant—that is, the incision was much the same as for lumbar colotomy, but reaching rather nearer the spine. On cutting through the transversalis fascia, it was found intimately adherent to the capsule of the kidney. The kidney itself was paler in tint than normal. A trocar and cannula was pushed into it, and thick pus welled out. A narrow bistoury was passed into the opening made by the trocar, and the kidney was laid freely open upwards and downwards to the extent of two or three inches; a large quantity (probably more than a pint) of thick, odourless pus escaped, and then the cavity was well irrigated with a stream of carbolic water, large masses of phosphatic and other deposit being thus washed out. The bleeding from the cut surface of the kidney (here about half to three-quarters of an inch thick) was very free; the edges were therefore seared with the thermo-cautery. On examining the interior of the kidney digitally, which could be fairly done when the abdominal walls were well pushed backwards towards the spine, the dilated calyces and the entrance to the ureter could be clearly distinguished. The anterior surface of the kidney was much thinned, and the finger moved about in it could be felt by the hand pressing upon the abdomen. The dilatation had evidently principally occurred at the expense of the anterior portion of the kidney, and it was evident that there was so much matting together of neighbouring structures that the organ could not be enucleated. One or two stitches were passed through the thickened capsule on each side of the incision and attached to the skin, so as to draw these two structures as much as might be together, and thus to assist in preventing extravasation of pus and urine among the muscular layers which had been, of course, freely divided. A large drainage-tube (half an inch in diameter), doubled up, was passed into the kidney, the ends projecting externally, and the wound, which still oozed, was filled with oiled gauze, the dressing being completed antiseptically.

The patient appeared somewhat collapsed for an hour or two after the operation, but warmth and stimulant enemata soon brought him round. He was made to lie on the wounded side. At 8.30 P.M. the dressings were found moist and were changed. The man passed a good night. At 8 P.M. the temperature was 104°; pulse 116; at 10 P.M. the temperature was 103°; at 8 A.M. next morning 101°. Five or six ounces of clear amber-coloured urine was passed during the night. The dressings were changed twice during the next day, there being much thin sanious discharge from the wound. That night the temperature was 104°; fifty ounces of urine were passed during the first thirty hours after the operation. On the 4th April the morning temperature was 100·2°; in the evening 99·4°; pulse 86°. Forty-four ounces of urine passed in the twenty-four hours.

After this, the progress was uninterrupted. The large double drainage-tube was removed on the fourth day after the operation, and a single piece of the same calibre and about eight inches long was passed into the kidney (and ureter?). There was no redness or swelling about the wound, and the antiseptic dressing answered admirably under the careful management of Mr. Hughes-Jones, the house-surgeon, the wound remaining throughout perfectly clean and sweet, and there being very little pus in the dressings, but generally a deposit in the urine. The temperature remained normal, there being only one rise (on the 21st and 22nd April), when the thermometer marked 103·4° and 102·4°; there was then some pain in the right kidney, and a little blood appeared in the urine. It seemed probable that these symptoms were due to the kidney contracting on the end of the drainage-tube, which was therefore partly withdrawn and shortened, after which the pain and flow of blood ceased, and the temperature at once fell to normal. The average daily quantity of urine passed for the first fortnight was forty ounces, and during the next month between forty and fifty; of course some escaped through the wound into the dressings.

Eight weeks after the operation, the man being, so far as concerned his general health, well, the urine having been for two or three weeks almost free from pus, and the wound being completely closed with the exception of a small sinus which was kept open by the drainage-tube, I removed the tube, hoping that the patient might be considered cured. At this time he said that he felt better than for twelve years previously. To my great disappointment, however, in a day or two his temperature ran up to 103·4°, and he had a return of the old feeling of pain and fulness in the right hypochondrium. There was also a little pus in the urine. With regret, therefore, I reintroduced the drainage tube, and very soon the temperature fell again to normal, and the patient was easy again, though disappointed like myself. The sinus was dilated with a laminaria tent, so as to admit a larger drain, and at the end of a month the patient went to Woolton. There he remained for six weeks, and then, having no home, he was readmitted into hospital. He was then in good health; told me that he had gained nearly two stone in weight (by the scales) in a little over two months, but he was most anxious to have the opening in the loin closed. The drainage tube was therefore removed; but a speedy return of the old symptoms once more necessitated its reintroduction. The question now arose, why could not the small quantity of urine secreted by the kidney pass through the ureter into the bladder? And it struck me that the ureter might be strictured or distorted, and that it might be catheterised, at all events through its upper portion. After a long and cautious trial, I was able to introduce a No. 2 gum catheter, with a slightly curved stilette, into what was evidently the upper part of the ureter, and then, withdrawing the stilette, to push it along until only about two inches remained outside the wound. It was tied in, and the next day a size larger was passed. It caused no inconvenience, and the man dressed himself and walked about as usual. Later on, as it had been urged upon me very strongly that there must be a calculus in the ureter, I determined to try to reach the bladder through the ureter, and clear up that point. I obtained some long French bougies, eighteen or twenty inches in length, and on at least two occasions passed one of them in nearly up to the waxed end. The patient declared that he felt the end in the bladder, and I felt it impinge against something hard, probably the bony floor of the pelvis. However, I failed to prove by injections of coloured fluids that the bladder had been entered, and I have now no doubt that the point of the bougie stuck at the vesical orifice of the ureter. That the catheters arrived thus far is, I think, proved by the patient's own sensations, and by the fact that when removed, after being tied in for forty-eight hours, they retained this shape, or very near it, the dotted line representing the opening in the loin.

No progress having been made in the direction of opening up the flow of urine towards the bladder, and it appearing likely that the quantity of urine excreted by the kidney was after all very small, it was decided that the best plan would be to re-open the wound and kidney, and keep it widely patent as long as possible, in the hope that the organ would contract and ultimately altogether cease its functions.

Accordingly, on the 4th September, the patient having been chloroformed, the wound was re-opened to about two-thirds of its extent; the kidney bled profusely and the thermo-cautery was used freely. The state of affairs was now very different from that observed in April. The portion of kidney which could be explored was now much contracted, the finger passing into one cavity (dilated calyx)

upwards, and into another funnel-shaped one downwards towards the ureter.

Excepting some pain and tenderness in the neighbourhood of the kidney, no inconvenience was felt from this operation. The wound was kept as freely open as possible; and in ten days or a fortnight the patient was walking about again; and things seemed to promise well. He passed from two to three pints of healthy urine in the twenty-four hours; had no pain; and the drainage from the wound was fast diminishing. But the man looked feebler; for several weeks he had been losing the bright and glossy look (characteristic of the healthy coloured man) which had returned to him in the summer; and he was losing flesh. He was allowed to go out every fine afternoon by the riverside; and on the 4th of October, his temperature having been for the previous fortnight normal, he had a slight rigor, and the temperature rose to 101·2°; he also had a headache and felt sick. Next morning his temperature was 105°, and he was complaining of pain in the right chest and of cough. Examination of the chest showed signs of right broncho-pneumonia; and from this he gradually sank and died on the 11th October.

A post-mortem examination showed the upper lobe of the right lung in a state of grey hepatisation, the section of which gave exit to abundant exudation of semi-purulent fluid. The bronchi were thickened, inflamed, and filled with muco-pus; the other two lobes were congested; there were some old adhesions at the base, and slight recent adhesions over the upper lobe; the lower lobe of the left lung was œdematous, otherwise healthy. The liver was adherent to the tissues round the right kidney, and its capsule was thickened; it weighed six pounds and a half (the normal weight being three to four pounds), was very soft, lardaceous, and showed signs of amyloid degeneration. The left kidney was greatly enlarged, weighing, when first removed, fourteen ounces and a half (the normal weight being four ounces and a half to six ounces), but some of this excess was lost by subsequent drainage of serum; its substance was pale, gave no amyloid reaction; its ureter was slightly hypertrophied, and the vesical orifice enlarged and patent. The tissues around the right kidney were much thickened and infiltrated by inflammatory material, the capsule being thickened and adherent to the surrounding structures; the finger passed through the sinus in the loin into the pelvis of the kidney and down towards the ureter; very little kidney structure remained anteriorly; the cortical and medullary portions were diminished in size, and the calyces enlarged. The ureter was shortened, its calibre much diminished, its walls thickened and bound down throughout by firm adhesions; the canal was, towards its lower part and at its vesical orifice, partially obliterated by adhesions of its mucous surface, which, however, were easily broken down with a probe. The bladder was somewhat hypertrophied, but otherwise fairly healthy. The membranous and prostatic portions of the urethra were much dilated, and communicated by a funnel-shaped opening with the perineal fistula, but the stricture of the urethra was completely cured. No calculus or calculous deposit was found, nor was there any purulent deposit, nor the slightest granulating surface found throughout the whole of the tract from the sinus in the loin to the fistula in the perineum.

Although the history of this case terminates with the death of the patient, I think I may claim that the operation was not in any way the cause of death; but that, on the other hand, it prolonged life, gave great relief, and would most probably have resulted in a complete cure had it not been for the diseased condition of the liver. With such a liver, and with only one kidney, the man was in a pre-eminently favourable condition for an attack of pneumonia, and in an equally unfavourable state for recovery from that complication.

Whether it would have been better to attempt complete removal of the kidney is a matter on which there may be some difference of opinion. In this case my own opinion is that it would have been impossible, without tearing away part of the peritoneum. In a similar case I should certainly adopt the same plan as I did in this instance; but I should not take any trouble to re-establish the flow of urine towards the bladder, but rather trust to free opening and drainage, and hope for contraction of the kidney. When this case was read before the Liverpool Medical Society, a member suggested that, with this end in view, the organ might be freely cauterised and destroyed. This plan would, I think, be dangerous, but I see no reason why, as long as a sinus remained, the wound should not be from time to time laid open deeply, and the exposed surface of the kidney well cauterised, thus doing just as much as, and no more than, would probably suffice for the desired purpose.

It is somewhat remarkable that one kidney only should have been affected consequently upon the bladder mischief. I should be glad to know if any readers of this paper can suggest a good reason for the fact. There have been several cases recorded lately of pyelo-nephritis in which one kidney only has been affected, but they have differed from mine in their origin. It is somewhat remarkable also that in some of these instances the diagnosis has been very difficult; in one case the symptoms all pointed to bladder trouble. In the case recorded in the last volume of THE LANCET by Dr. Pratt of Newtown, Montgomeryshire, the kidney was found converted into a large cyst full of pus, which probably might have been opened with a successful result. A similar case occurred quite recently in the practice of my friend Dr. Young, of Bootle, near Liverpool.

One word as to the incision. Having tried several times on the dead body the plan recommended by Mr. T. Smith of St. Bartholomew's (vol. lii., Medico-Chirurgical Transactions), I came to the conclusion that the incision as for colotomy, as suggested by Mr. Bryant, was easier, and exposed the kidney more freely. There must be also, by the latter, less division of nerves of the lumbar plexus; although in my case I presume that I divided the ilio-inguinal nerve, as the patient for a long time afterwards felt the right groin and scrotum quite numb.

THE DIAGNOSIS OF OVARIAN TUMOURS FROM THE CHARACTERS OF THE FLUIDS CONTAINED IN THEM.

BY LAWSON TAIT, F.R.C.S.

I NEED hardly point out the importance of this question to everyone engaged in the practice of ovariotomy, and I need not repeat here what I have said elsewhere as to the disappointment I have met with from both chemical and microscopical examination of the fluids removed by preliminary tapping.

A final effort has been made by my friend Dr. M'Munn, of Wolverhampton, to discover a help to diagnosis in the spectroscope. The details are given in his able work on "The Spectroscope in Medicine," now before me; and I regret to say his investigations lead only, as all others have done, to negative results. That there should be no mistake, I supplied him with fluids from tumours *removed*, so that their nature was definitely ascertained. His conclusions may be summed up in one of his notes (p. 129): "The microscopic and chemical characters of this specimen (ovarian) were almost the same as those of the last one (parovarian); . . . . and hence (for reasons given in detail) the spectroscope will not enable parovarian to be distinguished from ovarian cysts." He further says that "the presence or absence of the band of lutein will not help the diagnosis, as serous fluids yield the spectrum of this body." This upsets the hope that Thudichum gave us that the presence of this body might have a diagnostic value.

Whilst on this subject may I point out that a frequent statement concerning parovarian fluid, that it is always or generally limpid, is, in my experience, an error. Dr. Matthews Duncan says, in his recent lectures, "It is almost pure water, very little albumen in it, but appropriate tests show the presence of the chlorides of sodium and potassium. In the sediment there may be occasionally detected cylindrical epithelial cells, &c." He further says that it is generally of low specific gravity, though he has seen it like honey in consistence, and like coffee-grounds in appearance.

In the majority of my cases of parovarian dropsy the fluid has been thick, even to viscidity. Dr. McMunn gives a description of two such fluids from my practice, one of which was in thick layers, almost black, with a greenish shade; its specific gravity was 1024·6, and its quantitative analysis gave—water 90·346, solid organic matter 8·736, inorganic salts ·918. The inorganic salts consisted of chlorides, sulphates, phosphates, and carbonates, and iron was also present.

In such parovarian fluids I have seen all the microscopic

appearances said by some writers to be characteristic of ovarian tumours, and, therefore, I have come to the conclusion that we have nothing trustworthy but the experience of our finger-ends to help us in diagnosis.

Birmingham.

A NEW INSTRUMENT FOR ILLUMINATING AND MAGNIFYING THE ANTERIOR PORTIONS OF THE EYEBALL.

BY JAS. E. ADAMS, F.R.C.S.,

SURGEON TO THE LONDON HOSPITAL; ASSISTANT-SURGEON ROYAL LONDON OPHTHALMIC HOSPITAL.

HAVING frequently experienced some difficulty in seeing minute foreign bodies on the cornea, I had this instrument constructed with a view simply to focus artificial light on the cornea, and to magnify the image, at the same time leaving one's hands free for the necessary manipulations required to remove the foreign body. The difficulty, of course, only arises in private practice, where one has not a competent assistant at hand, but I have no hesitation in saying that this arrangement is even better than the aid rendered by the most expert persons.

I should not have thought so small a production worthy of being brought into public notice had I not found how very useful it is for purposes other than those for which it was originally intended. In the first place the cornea, aqueous, iris, capsule, and lens, can be examined, even by a novice, under most favourable conditions of illumination and enlargement.

One of the lenses can be brought down in front of the eye and used for producing an inverted image of the fundus for ophthalmoscopic purposes if so desired.

But, above all, it enables one to perform an iridectomy or any other operation on the interior of the eye at any hour of the day or night without an assistant. A few days ago I was asked to see a case a short distance from town, in which an immediate iridectomy was called for, the tension of the globe being + 3. Although it was dark, I was enabled to perform the operation with the utmost ease and safety, the illumination being derived from an ordinary gas-burner projecting from the wall of the patient's bedroom. Another point is this, that if lights have to be brought near to the patient's face, chloroform must be substituted for ether, whereas with this arrangement the light may be so far off as to render any precaution of the kind unnecessary.

The instrument (made by Messrs. Krohne and Sesemann) will be readily understood from the accompanying sketch. The anterior part of the fillet is made of metal, into which the arms are screwed. These arms have movement in every direction, and are so constructed as to enable one to command a view of either eye. The posterior part of the fillet is elastic, so that the instrument can be slipped on to the head of the patient instantly.

Finsbury-circus, E.C.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

POISONING BY OXALIC ACID.

(Under the care of Dr. ALLCHIN.)

FOR the following notes we are indebted to Mr. Samuel H. Butler, late house-physician.

M. L——, aged fifty-eight years, was admitted at 5.5 P.M. on Oct. 1st, 1879. When brought to the hospital it was stated that she had taken a cupful of fluid containing oxalic acid between ten and fifteen minutes previously. She was almost unconscious, could not be made to speak, and the extremities were cold. There was no vomiting; the pupils were dilated, and acted slightly to light; the pulse was almost imperceptible; respiration hurried; there was no evidence of corrosion about the mouth. With difficulty the patient was made to swallow some chalk mixture, and was then carried into the ward, where some more chalk mixture was given. After this she was very sick, and then more mixture was given, and hot-water bottles were put to her feet. At 5.20 she had been sick two or three times since the last dose of the mixture, of which eight ounces had been taken. The patient was very drowsy, and asked to be let alone. The extremities were still cold, and the woman complained of headache; the pulse was small and hurried; the pupils acted more readily to light. Six ounces of chalk mixture were given. At 5.45 there had been no more sickness, and the extremities were warmer. She said she felt better, but complained of sore-throat, pain, and great tenderness over abdomen. Next day there had been no more sickness. She complained of sore-throat, pain, and tenderness over the abdomen, also of headache, and she felt depressed; tongue pale and flabby; the bowels had not been open. To have milk and lime-water. On the 3rd, the bowels were opened once; she was slightly sick in the morning after milk. On the 5th the sickness continued after milk; complained of pain in the lumbar region, as well as in the abdomen, and great pain when swallowing. To have nutrient enemas, and ice to suck. On the 10th the enemas were discontinued; she was not sick after milk, and had no pain in swallowing. After this the patient gradually recovered, and began to take solid food by degrees. She was discharged on the 26th, feeling quite well; no pain or tenderness in abdomen.

It was ascertained that the patient had taken half an ounce of oxalic acid mixed with water, which her husband used for cleaning leather.

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, PRESENTING OPHTHALMOSCOPIC PHENOMENA.

THE following notes, for which we are indebted to Dr. E. H. Jacob, late resident physician, are continued from p. 168.

CASE 3. *Cerebral Softening; Hemiplegia; Optic Neuritis.* M. E——, aged thirty-four, admitted on May 24th, 1878, under Dr. Heaton. She had been married eleven years, but had had no children. Soon after her marriage she was under treatment for sores on her thighs, and a year before admission she attended at the infirmary for pain in the head. Three years before, she was laid up for a few days after a blow on the head. In March, 1878, she lost the use of her left limbs, and her mouth was drawn to one side.

On admission she was but slightly intelligent. There was some left facial paralysis, and she could move the arm or leg

on that side; tongue protruded straight. She constantly rambled, and was very emotional; sensation unimpaired. Passed motions involuntarily. There were some adhesions in the left pupil, and there was great difficulty in examining the eyes.

On June 10th, with some trouble, it was seen that there was considerable effusion round the right disc. On the 27th she became very quiet, and could hardly be roused. There was constant twitching of the left arm. Next day she appeared deaf, and could be roused only with difficulty. She had taken food, and spoken a few intelligent words. She lay on the right side, and had occasional twitching of limbs. She grew gradually more unconscious, and died on the 5th July.

The treatment consisted of iodide of potassium in increasing doses, to which was added on July 2nd some perchloride of mercury.

Necropsy, twenty-five hours after death.—Cerebral membranes much injected; arteries at base very hard. The posterior cerebral on left side filled with firm clot, and middle cerebral slightly obstructed near its origin. There was some superficial softening at the lower part of the left temporo-sphenoidal lobe. The right side of the brain showed some softening of the walls of the lateral ventricle. The whole brain-substance was very soft, partly red and partly of yellow tint, freely disintegrating under a stream of water (post-mortem change?) The softening, however, was much less marked on the left than the right side. Other organs healthy.

CASE 4. *Cranial Tumour; Optic Neuritis.*—W. B——, aged fifty-nine, admitted Oct. 24th, 1878, under Dr. Clifford Allbutt. Nine years before he was struck on the left ear by an iron spring, after which he was unconscious for an hour. He had been partly deaf for many years; he latterly got worse, and was treated as an out-patient for his deafness with some relief. He had then some pain in his joints, and about January, 1878, he began to have shooting pains in the head. Six months afterwards his sight began to grow dim. From the time he first noticed the pain in his head he had an obstruction in his nose, and occasionally a sanious discharge from his nostrils. There was no syphilitic history, except that he had occasionally had a sore tongue.

On admission he was rather thin, and had a somewhat dazed appearance. There was internal strabismus of the right eye, the pupil being rather smaller than in the left. There was considerable impairment of sight, and double optic neuritis existed. He was ordered ten grains of iodide and fifteen grains of bromide of potassium three times a day.

On Nov. 7th was in less pain, but had much the same appearance. The left hand measured only 15 lb. with the dynamometer, the right 40 lb. There was some dropping of the left angle of the mouth, and he complained of numbness in the left side of the face. On the 13th the right hand squeezed 30 lb., left 12 lb. There was a greater look of flaccidity about the cheeks, but less appearance of pain. On the 26th the pain had increased. He could not move the right eye, and the eyeball appeared rather more prominent than on the other side. On Dec. 17th he could not open either eye. There was no strabismus. He lay with his mouth open, could not protrude tongue or move his eyes. Could not chew his food. He could walk with assistance. He had great difficulty in swallowing. On Jan. 17th he swallowed better; could feed himself, and see objects on the other side of the ward, and was not so deaf. He lay quietly in the day on his back, with his eyes shut and mouth open, but he got restless about 9 P.M., and there was considerable difficulty in keeping him in bed at night. This improvement was but transitory. In a few days he relapsed into his former condition, and after lying for many days in a comatose condition, he died on Feb. 13th.

Necropsy, seventeen hours after death.—Body emaciated. Right eyeball sloughing. There was a tumour of hard fibrous consistence occupying the floor of the cranium in the middle line, extending into the cranial cavity, with rounded prominence, but more on the left side. It was then about the size of a walnut. There was some compression of the optic nerve on both sides, but no marked encroachment on the orbits. The bones from which the tumour sprang were much softened, and a probe could easily be passed from the interior of the cranium into both nasal fossæ. The arteries at the base of the brain were hard and atheromatous. The left temporo-sphenoidal lobe was much indented, but here was no softening and no adherence of membranes.

SUSSEX COUNTY HOSPITAL.

LARGE SARCOMA OF LEFT ILIUM; SARCOMATOUS THROMBUS OF LEFT COMMON AND EXTERNAL ILIAC VEINS; SARCOMATOUS EMBOLI IN RIGHT VENTRICLE OF HEART AND EIGHT LUNG; SECONDARY DEPOSIT IN LUNG; PNEUMONIA, ETC.; PNEUMOTHORAX; MELÆNA.

(Under the care of Dr. FUSSELL.)

J. M——, aged thirty-three, was admitted Feb. 5th, 1879. He was a married man, a gardener. He had been suffering from pain in his left hip for nine months, and had been treated during this time for sciatica. He had had three successive attacks of shivering. A week or two before admission he noticed some swelling about the left hip for the first time, and he was quite unable to bear any weight on the limb. He stated that he had never suffered from rheumatism, and had always enjoyed good health. There was no family history of cancer.

On admission, he was sallow and poorly-nourished, having, he said, lost flesh during his illness, and his expression was anxious. He complained of shooting pains from his left hip downwards to the foot, which prevented him from sleeping. The left foot, leg, and thigh were œdematous, and there was found to be great swelling, with induration, over the haunch-bone of this side, the swelling being hot, tender, and painful. There was also some fulness, with tenderness, in the corresponding iliac fossa; no glandular enlargement was discoverable; his bowels were costive, and he did not pass water very freely; tongue red, dry; pulse 96, small and soft. He was kept in bed, morphia was administered hypodermically to relieve the pain, and castor oil to act on the bowels. The swelling gradually increased, assuming very large proportions, his lower extremity became numb, and he grew more emaciated. Eventually, in about a fortnight or three weeks' time, well-marked signs of pleurisy and pneumonia were developed on the right side of his chest, followed by great prostration and distress. Finally, March 3rd, symptoms of pneumothorax occurred on the same side of the chest, and about the same time rather profuse melæna took place. From this date he quickly sank, and died on March 5th, one month after admission.

Necropsy, eighteen hours after death.—Signs of commencing decomposition were observable; rigor mortis fairly firm; slight hypostasis. There was no ascites, but the left lower extremity was œdematous from hip to toes. The body was rather emaciated. There were no scars noticeable beyond those produced by the hypodermic syringe, and very slight bed-sores. The swelling above-mentioned in connexion with the left hip was now very prominent; it occupied the dorsum ilii and the iliac fossa, and was hard and firm. On dissection it was found to spring from the whole of both surfaces of the ala of the ilium, to which it was quite limited, and which it had eroded, though not actually perforated. On cutting into it the mass was white and suety in appearance, and firm and hard throughout, except for a small extent in its interior, where it had softened down into a pulpy cavity containing a clot of blood. Distributed through its substance was a quantity of bony or calcareous material. Microscopical examination of the tumour showed it to be a specimen of sarcoma, composed of a dense matrix of fibroid tissue, with cells of various sizes and shapes, mostly rounded, but some angular, spindle-shaped, and caudate; some with large, well-marked nuclei, and others with indistinct granular contents embedded in it. In most places calcareous granules were scattered, but no true bone-cells were discovered. The nerves in the neighbourhood were pressed upon; the external and common iliac veins (left) were also compressed, and were blocked internally by a large white flattened mass, suety in appearance, hard, and irregular on the surface. Microscopically this was found to consist, in part at least, of sarcomatous tissue, presenting roundish nucleated cells of considerable size, interspersed in an indistinct or slightly fibrillated stroma. It was lying loose in the lumen of the vessel, the walls of which were not invaded. The upper part of the femoral vein contained a somewhat similar, but softer, mass, more like an ordinary coagulum (not examined microscopically). Lumbar glands not enlarged. The cervical glands were not enlarged. Ribs and costal cartilages healthy. On opening the chest, the right pleural cavity was found occupied by a pyo-pneumothorax, the lung being collapsed and compressed into a small space at the upper and inner

part, except anteriorly opposite the first, second, and third ribs, where it was bound to the chest-wall by firm adhesions. The cavity was lined by a thick, shreddy pyogenic membrane, and, besides air, contained a pint or two of fetid pus. The left pleural cavity contained a small quantity of serous fluid, and posteriorly there were a few adhesions. The right lung was much compressed, though capable, as far as its middle and lowest lobes were concerned at least, of being inflated through the main bronchus. Its uppermost lobe was completely solidified, of a greyish colour, granular on section, and yielding when pressed a thick purulent fluid from all parts of its cut surface, some flowing from the tubes, and some oozing from the solid pneumonic tissue surrounding them; this tissue was riddled throughout with points of pus, like minute abscesses, and broke down under firm pressure into puriform pulp; it was, in fact, in a condition of grey hepatisation and purulent infiltration. It was traversed also by a considerable quantity of fibroid tissue, owing to which it was firm. It contained no air, and sank like a stone in water. The middle lobe was carnified by compression, sinking in water, but could, as before said, be inflated. Its tubes were filled with pus, though its tissue was not pneumonic like that of the preceding, and did not break down into puriform pulp. Near the posterior surface of this lobe was a small, hard, pinkish nodule, pale and granular on section, not encapsuled, but embedded in the pulmonary tissue itself, evidently a secondary deposit of sarcoma. The lowest lobe, also compressed, but also capable of inflation, presented generally fairly healthy tissue. At the upper and posterior part of its surface, however, was a small space or cavity, collapsed and empty, and formed apparently by simple breaking down of lung tissue, though from what cause did not appear evident, unless, indeed, it were due to the plugging of arteries to be presently mentioned. Possibly a process of ulceration had occurred from without inwards, as the pleura and pyogenic membrane at this spot had also given way. Certainly there was no tubercle. Anyhow this small space communicated with the pleural cavity, and here was the origin of the pneumothorax. On pressing the lung in the neighbourhood of this, a number of curious elongated, white, rusty-looking masses exuded, like maggots, from the small branches of the pulmonary artery. On examining further, a great number of similar masses were found in the vessels of every part of this lobe. They were all quite white, firm in consistence, and perfectly unattached, lying free in the lumen of the vessels, from the cut ends of which they could be squeezed out, as before said, like maggots, or rather like the sebaceous matter from a distended follicle. Some were branched, corresponding with the divisions of the arteries; and many were tubular, having a minute canal bored through their centre. One was seen to terminate by a closed end, resembling a miniature test-tube; this one was smooth on the surface, but most, if not all, of the others presented an irregular varicose or beaded appearance. At first it was thought they might be fibrinous casts, but microscopic examination proved them to be actually *emboli of sarcomatous tissue*, composed of very distinct, roundish cells embedded in a slightly fibrillated matrix—having, in fact, a structure identical, both microscopically and to the naked eye, with another mass in the right ventricle of the heart (to be presently described), with that in the left iliac vein before mentioned, and with the softer parts of the tumour connected with the haunch bone (except that in this main tumour the cells were not quite so numerous). In another part of this same lobe a nodule of secondary deposit existed, embedded in the pulmonary tissue. Some of the tubes contained a little pus.—Left lung: Upper lobe pale, emphysematous; apex somewhat congested. Lower lobe solid almost throughout; riddled with pale-yellowish granular patches of pneumonic consolidation, very readily breaking down under the finger; intensely gorged with blood at its extreme base; sinking for the most part in water. Some bronchial glands on both sides enlarged. Larynx healthy, but filled with the same kind of fluid as was found in the right pleural cavity. The mucous membrane in the neighbourhood of the aryteno-epiglottidean folds and the adjoining part of the pharynx was covered with shreds, similar to those on the right pleura, and probably carried up from that membrane through the lung and lodged there; but there were also some rough, yellowish, shreddy deposits evidently belonging to the mucous membrane of this part itself. Pericardium healthy. Heart about normal in size; tissue good. In the right ventricle was a partially decolorised clot of some size. On pressing this, a long white pedunculated or polypoid mass, about two and a half inches in length, with a somewhat rounded head and a long stalk, not unlike a barnacle, started out from the centre. This was quite firm, irregular on its surface, having a somewhat twisted or annulated appearance (due to the projection of numerous bead-like excrescences), exactly resembling, except in point of size and shape, the suety bodies found in the branches of the pulmonary artery in the right lung. It was quite unattached to the walls of the heart, and was evidently of embolic origin, derived from the mass in the iliac vein, the blood-clot having formed around it so as to completely enclose it; it was only discovered accidentally while manipulating the clot. Microscopically it was seen to be composed of cells mostly roundish, but some irregular, of various sizes, scattered through a fibrillated stroma, having a structure therefore identical with that of the bodies previously described. The expanded portion, or head, was filled with a soft glutinous pulp containing similar cells microscopically. The right auricle contained a large softish blood-clot, partially decolorised. Left cavities contained a little dark clot. All the valves were healthy. Aorta healthy, or at least with only a few minute yellow opaque spots on its interior. On opening the abdomen the intestines were found much discoloured. Almost the whole of the ileum and the large intestines were filled with blood and tarry fæces. The mucous membrane was in many places infiltrated with blood, and in others highly congested, but the source of the hæmorrhage was not evident. There was no sign of ulceration in these parts of the bowel. The jejunum was quite healthy and empty. The upper part of the duodenum was congested, its mucous membrane being very distinctly mammillated. Here was a large ulcer, or rather the depressed cicatrix of one, with thick rounded edges. There was no trace of bleeding here. Stomach healthy, peritoneum healthy. Pancreas healthy. Spleen pale on section, rather firm; not staining with iodine; structure healthy. Liver 67 ounces, pale on section; structure healthy. Kidneys very firm; pale on section; structure healthy, not yielding the amyloid reaction with iodine. Capsules readily stripped off. Bladder, prostate gland, and urethra healthy. No pus in joints. Head not examined. Spine not opened. Bones healthy (as examined superficially), not affected by the tumour.

Specimens of the growth, the thrombus, and the emboli are preserved in the Hospital Museum.

Remarks by Dr. FUSSELL.—It would seem that the tumour in its growth had compressed the iliac vein, causing blood-stasis and coagulation; that the coagulum thus formed had imbibed material through the walls of the vessel, becoming itself organised into a sarcoma; that portions of this had become washed off, giving rise to the emboli found in the right side of the heart and lung.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Osseous and Articular Lesions in Locomotor Ataxy.—Leprosy.—Fatty Tumour of Abdomen undergoing osseous and fibrous Change.—Varicella gangrenosa.—Congenital Syphilis of Larynx.

THE ordinary meeting of this Society was held on the 3rd inst., the President, J. Hutchinson, Esq., in the chair. There was a good attendance of members, and specimens of considerable interest were exhibited. The meeting was prolonged for half an hour, as the usual time of the meeting was consumed on the discussion on the osteo-arthritic changes met with in locomotor ataxy.

Dr. BUZZARD exhibited three patients suffering from Osseous and Articular Lesions in the course of Locomotor Ataxia. One of these, a man, had previously been shown at another Society, and a history of the case published (THE LANCET, January 18th, 1879.) The salient points of the case were therefore alone related. He is a typical example of tabes dorsalis, in whom the right hip-joint was completely disorganised (the head and neck of the femur having entirely disappeared) within a space, probably, of three months. He presented, besides, a curious

bony process, nine inches long, developed in the superior tendon of the rectus femoris muscle of the same side. Of the two other patients, Case 1 was Elizabeth W——, aged fifty, widow, an in-patient of the National Hospital for the Paralysed and Epileptic, for the opportunity of observing whom Dr. Buzzard was indebted to the kindness of Dr. Lediard, of the Clevelnnd-street Sick Asylum, under whose care she had previously been. The patient, who has suffered for about eleven years from typical "lightning" pains in her legs and arms, has been affected for an equal time with attacks of the *crises gastriques* of Charcot, attacks in which there is pain in the stomach and chest, with continual retching and vomiting, occurring at irregular intervals, sometimes as many as four in four months, the longest period of exemption having been eight months. Other symptoms of tabes which she presents are ataxic gait, very small pupils not reacting to light, analgesia of extremities, defective muscular sense, and absence of patellar tendon reflex. In October, 1878, whilst walking quietly along the ward, her right femur fractured through its neck. In July, 1879, whilst retching in bed, the left hip-joint suddenly "bulged out." Since then she has been unable to use either leg. Mr. Adams, who examined the patient at Dr. Buzzard's request, reports the movements of both hip-joints free, but limited in some directions, with crepitation more marked in the right than the left. On the right side the top of the great trochanter is nearly level with the anterior superior spinous process, and on the left the trochanter is extremely prominent, and the bone enlarged. The conditions observed may be due, he thinks, either to spontaneous fracture of the neck of the bone on each side, or to complete disorganisation of the joint, with atrophic changes and absorption of the head and neck of the bone on the right side, and similar changes on the left, associated with enlargement of the great trochanter from throwing out of new bone. Case 2 was that of Catherine M——, aged thirty-six, married, an out-patient of the National Hospital for the Paralysed and Epileptic. For the opportunity of observing this patient Dr. Buzzard expressed his obligations to Professor Henry Smith, who had invited him to see the woman when she was a patient in King's College Hospital, and had facilitated his following up the case after her discharge. Like the other woman, she has been subject (for upwards of ten years) to attacks not only of typical "lightning" pains in her extremities, recurring at intervals of a month or two and lasting three or four days, but also of very characteristic *crises gastriques*. These occur at irregular intervals, between which she feels quite well. She has never been six months without an attack. There is distension, pain, and more or less vomiting and retching, which formerly lasted two or three days, and is now not so severe, but griping and flatulent eructations recur daily for weeks at a time. Her other symptoms have been staggering gait, diplopia, inability to stand with eyes shut, partial colour-blindness, pupils insensitive to light, analgesia of extremities. Three years ago the right leg became red and swollen, though not painful, which symptoms subsided under rest; but in June, 1878, they recurred. In September the swelling had gone down, but the knee-joint was useless. At the same time the left leg began to swell, and was larger than natural when she was admitted into King's College Hospital at the end of the year. At that time the right knee-joint was found to be disorganised. There was grating, but no pains on moving the ends of the bones. The internal condyle was enlarged, and projected inwards. The external condyle could not be felt. The patella rested on the outer surface of the lower end of the femur, the ligamentum patellæ being wasted. There was fluctuation in the joint. The left leg was swollen, and this knee-joint, which was apparently not affected on admission, became enlarged, and the leg dislocated outwards and backwards during the patient's stay of one month in the hospital. The muscles of the lower extremities were wasted. She was discharged at the end of January, with leather supports to each knee, which enable her to move about with help. There has since been swelling and crepitation of the right shoulder-joint. Mr. Broster, resident medical officer to the National Hospital in Queen-square, reports, as to the present condition, that it feels as though all ligamentous connexions had disappeared from the right knee-joint. The ends of the bones cannot be brought into apposition, and they are so loosely connected that the patient, ere she puts on the leather casing, has to splice them together with a bandage. They can be knocked together audibly, and without pain. It seems as though the condyles had been bevelled off, and the end of the femur turned into a rounded and smooth stump, whilst the upper end of the tibia is bevelled off inwards. The patella lies two inches above and to the outside of the end of the femur. Along the outer side of the inner hamstring is a firm, smooth, rounded mass, one inch by half an inch. On the left side the tibia and fibula are dislocated backwards and slightly outwards. The condyles are rounded off, the inner one being enlarged. The patella lies over the end of the femur in front. Dr. Buzzard remarked that although nearly twelve years had elapsed since Charcot first described the arthropathy which was apt to occur in tabes, the subject had hitherto engaged but little attention in England. So far as he knew, the three patients present were the first living specimens of the disease which had been exhibited at a metropolitan medical society, although the profession was indebted to the president (Mr. Hutchinson) for important contributions to the subject in his recent lectures at the College of Surgeons. Soon after Charcot's description had appeared, Clifford Allbutt published "a case of locomotor ataxy with hydrarthrosis" in the St. George's Hospital Reports for 1869, and this was the first described in England. The second was published by him (Dr. Buzzard) in THE LANCET, August 22nd, 1874. It was a typical example of tabes with enormous swelling and disorganisation of the knee-joint, which began when the patient had been affected at least five years with the disease, and proceeded with great rapidity. This made altogether four well-marked examples which had occurred in Dr. Buzzard's practice, but he had besides seen a few others of similar nature but less broadly characteristic. This scarcity of experience in England contrasted strongly with the amount of interest which the subject had attracted in France, where important contributions to it had been made by Ball, Vulpian, Richet, Dubois, Bourneville, Bouchard, Oulmont, Voisin, Michel, Bourceret, and others. Dr. Buzzard referred especially to articles by Talamon (*Revue Mensuelle*, Paris, 1878), to which he had been indebted for information. In 1873, Weir Mitchell had alluded incidentally to the frequency of fractures in tabetic patients, and about the same time Charcot brought to the Société Anatomique of Paris the case of a woman (affected with tabes dorsalis) in whom, concurrently with great disorganisation of certain joints, multiple spontaneous fractures of the neck of the left femur, and of both bones of both forearms, had occurred. At the present time Charcot is disposed to consider the alteration in the nutrition of the osseous tissue the prominent fact, the joint changes and the spontaneous fractures being each secondary manifestations of the fault of nutrition of the bone, dependent on an influence of the nervous system. According to the same authority, the extremely rapid wearing away (*usure*) of the articular extremities is the principal character which distinguishes tabetic arthropathy from arthritis deformans. It was noteworthy, in reference to the case of W——, that in cases of spontaneous fracture due to tabes, it was common to find a more than usually exuberant callus thrown out. Dr. Buzzard pointed out that in the three patients present there were, or had been, examples of all the conditions which had been described as characterising the osseous and articular lesions of locomotor ataxia. Extensive swelling, more often than not painless, and never confined to the joint itself, but extending also down the long axis of the limb, disappearance or disablement of the articular ligaments, rapid erosion or absorption of the ends of the bones, were the features which marked two of the cases. In the other, spontaneous fracture, certainly of one femur, and, as he believed, also of the other, was coupled with the formation of what was probably a voluminous callus. The evidence that the patients were examples of tabes dorsalis was not open to the least doubt. Referring to the question, Where was the seat of lesion in the nervous centres? Dr. Buzzard remarked that Charcot's original idea, that this was probably to be found in the anterior cornua of the cord, had not been supported by the results of three recent autopsies of arthropathic cases, in which the cells in the anterior horns had been found perfectly healthy. On the other side, too, he referred to the frequency with which extensive changes in the cells of the anterior horns had been found in cases of amyotrophy, which presented no such osseous lesions as those they were considering. He drew attention to the remarkable fact that the symptoms known as *crises gastriques*, which were comparatively rare in tabes (he had only met with them eight times, and in only

four of these well pronounced, in a range of fifty-six cases of tabes in his own experience), were extraordinarily frequent in these cases of arthropathy. They were present in two out of his own four cases, they occurred in the only instance of spontaneous fracture in a tabetic patient which Vulpian had witnessed, and in a range of sixteen other cases of arthropathy, which he had collected from French sources, six were characterised by the gastric phenomena. This association was too remarkable to be attributed to accidental coincidence. As the gastric symptoms might, with some confidence, be ascribed to sclerosal invasion of the roots of the vagus, he ventured to suggest the probability that a change in some structure contiguous to these in the medulla oblongata might be found to be the lesion giving rise to the altered nutrition in the osseous system, and he thought that it was in this quarter that pathological anatomy might usefully direct its inquiries. Without claiming for this idea any position beyond that of a legitimate hypothesis suggested by the clinical association of symptoms, Dr. Buzzard reminded his hearers how much aid the discovery of a centre for nutrition of articulations in the medulla oblongata would afford towards the explanation of the remarkable association of cardiac complications with articular rheumatism, as well as the occasional high temperature witnessed in the latter disease, besides, perhaps, helping to throw light on the obscure pathology of arthritis deformans.

Dr. GOWERS showed an Elbow-joint from a patient with Locomotor Ataxy (aged forty-five) who, four years after the disease commenced, and when the symptoms were well marked in both arms and legs, fell, striking the elbow. He used the arm next day without inconvenience, but the joint rapidly swelled, and a doctor whom he consulted thought some bone had been broken. Two months later, when seen, the joint was enormously swollen, fourteen inches in circumference, abnormally mobile, and loose bone could be felt. There was not, nor had there been, any pain. The swelling slowly lessened. Six months later he died from a painless but extreme pleural effusion. The cord presented the usual lesion. In the elbow-joint the external condyle of the humerus had been split off, and the coronoid process of the ulna was also fractured. The ends of the bones had lost most of the cartilage and were eroded. The synovial membrane was covered, between the bones, by villous projections, some fine, others large. There were also two pieces of bone which could not be accounted for by fracture; one, about half an inch square, was above the coronoid process and projected into the cavity of the joint; the other was a plate of bone in the outer wall of the synovial sac about an inch square, but apparently in two pieces. The case was of interest as illustrating the course of a joint lesion in ataxy and on account of the painless character of the swelling, and the continued use of the arm in spite of the degree of damage. The painless character of the fatal pleural effusion was also worthy of remark.

The PRESIDENT showed several casts of specimens and cases sent to him by Professor Charcot from Paris. The first illustrated the changes in the bone described by Dr. Gowers, two showed a wearing away of the upper part of the femur, or possibly ununited fracture of the neck of the bone; another, extensive shortening of the femur after fracture. Another cast was from the shoulder of a patient in whom the head of the humerus, apparently unaltered in shape, was displaced under the clavicle and projected strongly under the skin; the bone was quite loose, with free and painless mobility; the opposite humerus was dislocated on to the dorsum of the scapula, and one knee was dislocated, the tibia and fibula being twisted and displaced up behind the femur, which was deformed from the loss of its outer condyle; in all these joints there was remarkable freedom of mobility and absence of pain, and the femur was greatly altered in form. He also related the case of a gentleman who suffered most severely from gastric crises, for a year being incapacitated from business by the frequently recurring attacks of pain and vomiting. These symptoms passed off, and he then consulted Mr. Hutchinson for pain and weakness in the right hip, which was diagnosed to be rheumatic arthritis. Three years later he again saw him for commencing amaurosis. Rapid blindness with white atrophy of the optic nerve ensued, and on inquiry he learnt that the patient had suffered from characteristic pains in the legs. On examining the hip at this time there was evidence of a dorsal dislocation of the femur, with absorption of the head and neck of the bone, or of ununited fracture of the neck of the femur; the man moved with great agility, and there was perfect recovery from the former pain and weakness. He exhibited the hip-joint of a man, recently dead, that had been under his observation for some fifteen years. There was first of all amaurosis which never became complete, followed by definite symptoms of ataxy. At the autopsy the limb was found much shortened, with an ununited fracture of the neck of the femur resembling other examples of that injury, the repair being very complete; the deposit of bone on the great trochanter was hollowed out into a cup-like cavity to receive the prominence of the acetabulum containing the head of the bone. Nothing was known as to how or when this fracture occurred; there was no history of any severe injury at any time, and it was an example of an almost spontaneous fracture. In this particular case it was likely that the ataxy had to do with constitutional syphilis.

Mr. DORAN stated that Charcot has presented an actual specimen of this disease to the Hunterian Museum, which also contains a collection of specimens illustrating leprosy presented by Dr. Allen, among which are some humeri showing spontaneous division of the bone, which was thinned down to a very fine stem, and at last broken across. Spontaneous amputation of the whole thickness of a limb was well known in leprosy; these specimens showed the change limited to the bones.—Mr. MACNAMARA was unable to agree with Dr. Buzzard in regarding the joint changes as the result of some central nerve lesion. In all the cases there was first of all synovitis with great distension of the joint, which must necessarily interfere with the nutrition of the joint, and the articular cartilage would early suffer. As the subjacent calcareous lamina of bone was dependent for its nutrition upon the cartilage, it would soon be destroyed when laid bare, for the continuous molecular disintegration would not be repaired in the absence of the cartilage; thus the cancellous bone would be exposed and would waste, while some of the medulla might protrude and thus give rise to the bony outgrowths met with in many instances. The articular change was identical with that of chronic rheumatic arthritis, but the nerve disease led to great wasting of the muscles and consequent looseness of the joints. Possibly there were nerves in bones, but as yet they had not been discovered. Ten years ago he was consulted by a gentleman in India for what he took to be rheumatism; within the last eighteen months he had again consulted him for increasing blindness with atrophy of the optic disc and well-marked locomotor ataxy. The head of the right humerus was now entirely destroyed, the shaft of the bone being pushed up and projecting under the skin; there was no evidence of change in the hips and knees. In this case, as in the others, degeneration of the bones was preceded by marked synovitis, and he thought that in this, and not in any central nerve lesion, lay the explanation of it.—Dr. STURGE had under his care at the present time a man with marked symptoms of locomotor ataxy, whose earliest symptoms were severe gastric crises; then there was swelling of the joints, and other symptoms developed; the joint swelling subsequently disappeared and left but slight signs of joint mischief. He had also seen two instances of spontaneous fracture in ataxy. In the one case the right tibia was broken in its upper third while the man was drawing on his boot, and subsequently the femur broke near its lower end; the other was a woman in Paris whose tibia and fibula gave way during walknig, and a few days afterwards her humerus snapped while she was pulling herself up in bed. He thought Mr. Macnamara had only removed the question a step further back, for he still had to account for the occurrence of the synovitis, and also for the cases in which the changes in the bones were out of proportion to that in the joints.—Mr. HULKE reminded the Society that several years ago the late Mr. C. de Morgan showed the hip, knee, elbow, and shoulder joints apparently affected with this disease; there was great distension of the joints with relaxation of the ligaments, curious deformities from the removal of natural eminences and the deposit of masses of new bone; the neck of one femur was broken through and showed large spines of new bone projecting down from it; there was also an absence of pain in this case, with free flail-like movements of the joints. He was uncertain, but thought the man was not suffering from dorsal tabes.—Mr. MORRANT BAKER asked in what this disease differed from osteo-arthritis. Might Dr. Buzzard's and the other cases be only coincidences of the two affections in one person? Probably, as each condition was common, they would be occasionally combined. But if not, did these cases help us to the conclusion that osteo-arthritis is a neurosis?—Dr.

CURNOW mentioned the case of a man under his care at the Seamen's Hospital with well-marked locomotor ataxy in whom during the last five or six months a large number of fatty tumours had developed in the subcutaneous tissue. If the arthritic changes were neurotic, might not the widespread and symmetrical development of these tumours be considered neurotic also?—Mr. BUTLIN suggested that the disease consisted at first of a general arthritis like that of a chronic rheumatic arthritis, but that it was associated with atrophy of the bones instead of outgrowth from them.—Dr. BROADBENT had seen the younger of the two women brought forward by Dr. Buzzard, at an early period of the disease. The affection was attributed to a heavy fall on the back before which there had been no symptoms of anything wrong. The characteristic ataxic pains were not then prominent; the pupils were dilated, not contracted, and not quite fixed but not freely mobile. The gastric crises were also peculiar; they came on at night, and were marked by pain more than by vomiting. During the attacks the woman got out of bed and beat herself violently over the abdomen, and for the time the ataxic symptoms disappeared, her movements being quite agile. When the arthropathy first appeared there was no effusion into the joints, but a large bursa behind the knee was distended, the surrounding structures became relaxed, and the bones of the leg projected backwards. He had seen only very few cases of arthropathy, and was not prepared to agree with Dr. Buzzard in the association between it and the gastric crises; he could recall six cases of these crises, two of which were dead, and in only one of whom was there any joint affection.—Dr. BUZZARD expressed his thanks for the interesting cases narrated, and specimens shown by the various speakers. The cases related by the President and Dr. Sturge were two more instances of the association of gastric crises with arthropathy. He had never heard of a case similar to Dr. Curnow's. No doubt the joint changes were anatomically similar to those of chronic rheumatic arthritis, but the differences between the two affections were so marked that he could not look upon them as one and the same. First of all, chronic osteo-arthritis, when generalised, attacks the smaller joints in preference to the large, while in the ataxic cases the small joints had not been affected. Next, the quantity of fluid effused in the ataxic arthropathy is enormous and not limited to the joint, but extends beneath the muscles all along the limb. Further, many of these cases show a marked retrogression which was never met with in the rheumatoid affection. Was dislocation met with in osteo-arthritis? The extreme suddenness of onset and rapidity of the destructive process were also very distinguishing features of these cases; in one of Charcot's cases in three months there was entire destruction of the head of the humerus. He considered the vice of nutrition to affect directly both the synovial membrane and the bone. The disease had been met with so often now that he thought coincidence might be put aside.

The PRESIDENT exhibited a boy aged ten, who was born in Calcutta of English parents. He came to this country four years ago, when he had paralysis of both ulnar nerves; he now suffered also from marked dusky erythematous discoloration of the skin and anæsthetic patches. The feature of interest in the case was the paralysis preceding the marked skin change.

Dr. DRESCHFELD showed three Tumours removed from a lady aged forty-nine, who suffered three or four years ago from a hard swelling in the left lumbar region, which could not be recognised as connected with any abdominal or pelvic viscus. Last year she consulted Mr. Heath again on account of loss of flesh, failing appetite, and abdominal tenderness. Another tumour, firm but less hard than the first, was now found in the right lumbar region. The patient was anxious for something to be done, and accordingly, on Oct. 17th, Mr. Heath made an exploratory incision into the abdomen, and soon came on an osseous tumour, which he turned out from a distinct capsule, round which he placed a ligature; a second tumour, larger and less firm, was removed in the same manner. Death occurred on the fifth day from peritonitis and shock. At the post-mortem examination an enormous fatty tumour, weighing 12 lb., was removed from the back of the belly, and it was found by the position of the ligatures that the two smaller growths had been originally connected with this larger mass. The small tumour was purely bony, of ivory consistence, and close to its attachment to the large growth were scattered several small nodules of bone; the other tumour was partly fatty and partly fibrous. The specimens were interesting, because fatty tumours are rare in the abdominal cavity, only two being recorded in the Pathological Society's Transactions. Also, while calcification is a common change in fatty growths, true ossification is very rare, and still more unusual is it to find one part of a fatty tumour ossifying, while another part is becoming fibrous.

Dr. ABERCROMBIE showed the body of an infant which had recently died in the Hospital for Sick Children, which was admitted with several sharply cut circular ulcers about the head and trunk; it was very feeble, and died in two days. At the autopsy one small ulcer was found in the small intestine, and some of the mesenteric glands were caseous. A fortnight before the child's admission to hospital four other children in the same house suffered from undoubted varicella, and the day after its admission a fifth was attacked with the same disease; there was thus strong reason to call this case varicella gangrenosa. Dr. Dickinson had told him that in all these cases there is evidence of tuberculosis.—The PRESIDENT knew of no case in which the diagnosis of this affection was so conclusive as in this instance, and the case became, therefore, of great importance. He and others had met with several cases of children with gangrenous patches of skin, but there had been difference of opinion as to their real nature. He thought this case was conclusive evidence that they were examples of gangrenous varicella. He had seen many similar cases, and one of vaccinia gangrenosa.—Dr. BARLOW had seen seven or eight cases of this disease, and there was a good model of it in Guy's Hospital Museum, labelled Rupia escharotica. In all the fatal cases he had found more or less evidence of tuberculosis, which he had looked upon as the cause of the gangrenous action, and had not suspected that they were cases of varicella till the last but one of his cases. In all cases the first appearance is a bulla nearly always on the head or trunk, on which a thick scab forms, under which rapid and deep ulceration occurs, so that in three or four days the bone may be exposed. Only a few cases recover.

Dr. F. SÉMON exhibited the Larynges of two brothers, both affected by Congenital Syphilis. There was abundant evidence of syphilis in the parents, and both children, in addition to other syphilitic affections, suffered from laryngeal trouble from the age of one month, dyspnœa being very marked. There was ulceration about the lips, mouth, and pharynx; laryngoscopic examination was very difficult and imperfect. Treatment was conducted irregularly. On January 10th the eldest child died, after exacerbation of the dyspnœa for five days. There was great chronic thickening of the upper aperture of the larynx, with only subordinate ulceration; and it was from the aggravation of this chronic process, rather than from acute œdema, that death ensued. The younger child died within three weeks from acute œdema of the middle compartment of the larynx, which was completely occluded, the upper aperture of the larynx being almost free. Deep lesions of the larynx are very rare in congenital syphilis; and simple chronic thickening of the parts, very rare in adults, had not been observed before in children. It was remarkable that syphilis should have attacked the larynx especially, in these two brothers, and remarkable also that each should have fallen a victim to acute œdema.

The specimens shown by card were:—1. Drawings of Cancer; by Mr. Hulke. 2. Microscopic specimens of Optic Neuritis with good sight; by Mr. Nettleship. 3. Microscopic specimens of Atrophy of the Optic Nerve and Retina, and other changes in an Eye, lost by erysipelas spreading to the orbit; by Mr. Nettleship.

The Society then adjourned.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of the Society, held at 1, Adam-street, Adelphi, on Friday, Jan. 16th—President, John Syer Bristowe, M.D.—Dr. JOHN TATHAM, Medical Officer of Health for Salford, read a paper on certain reforms which appear desirable in the statistical tables adopted in their annual reports by medical officers of health acting for large urban districts, of which the following is an abstract:—After acknowledging that the tables recommended by the Society were of value to metropolitan health officers, he pointed out that they were but sparingly adopted in the provinces;

moreover the tables had been drawn up some five years ago, and it was now worth while considering whether these forms could not be modified so as to answer the purpose of metropolitan as well as extra-metropolitan officers of health. It is to be regretted that, though the whole of England has been parceled out into sanitary districts, the national collection of local sanitary statistics is so meagre as to be positively discreditable to the public health service—a result due to the fact that the health officers are working solely with regard to local requirements, and entirely without reference to a national statistical system. Dr. Tatham then suggested that the tables which he submitted to the Society should be referred to the same committee which five years ago compiled the statistical forms of 1874, and at the same time he stated that the tables were the work of a friend who had had great experience in vital statistics. The following is a summary of the information given in the tables which accompanied the paper:—Table A gives the density and birth and death rates. Table B gives an analysis of the mortality for a series of years. It shows the deaths of children at ages under one year, under five years, and those of persons over 60 years, and also the death-rates at those ages, and from seven zymotic diseases, the infantile mortality being measured by the number of children dying under twelve months old per 1000 births. Table C gives the births registered in a town, and in its various registration subdistricts, wards, or other statistical subdivisions, distinguishing legitimate and illegitimate births. Table D gives the estimated population, the birth and death rate, the deaths and rate of mortality per 1000 living in the various statistical subdivisions of a town. The death-rates are also given for these areas from the five principal classes of diseases; the deaths occurring in public institutions having been distributed. Table E gives the population and the annual rate of mortality occurring in a town at five groups of ages, compared with the English life-table rate at those ages for males and for females. Table F shows the principal causes of death in combination with ages at the five selected groups. Table G gives the deaths from several specified causes, without distinction of age, occurring in the various wards of the borough, and also the deaths occurring in the various public institutions. Table H gives the annual rate of mortality during the twelve months from the five classes of diseases at five groups of ages per 1000 persons estimated to be living at those ages. Table I gives the number of deaths, and proportions of deaths, certified by medical practitioners, by the coroner, and the number and proportion of uncertified deaths. Table J gives the prices paid by the poor-law authority for the principal articles of food and fuel.—In the discussion which followed, the President, Dr. Longstaff, Dr. Tripe, Mr. Humphreys, Dr. Browning, and Mr. Shirley Murphy took part.

Reviews and Notices of Books.

Cholera: its Natural Laws and Progress. Extract from Surgeon-General's (British Forces) Annual Report for 1878.

THIS paper cannot be considered as a history of cholera as it appeared among the troops in India in 1878. It is rather a summary of the conclusions arrived at by Dr. Bryden from his statistical labours of fifteen years, and an attempt to remove some of the mist in which the origin and progress of cholera epidemics are enveloped, and to deduce certain practical lessons on the subject. As the paper is what it purports to be—a succinct statement of the views put forward by Dr. Bryden for the past fifteen years—it would be impossible, in the limits at our disposal, to give anything like a full statement of these views. We shall, therefore, content ourselves with bringing to notice a few of the leading points, and of the practical conclusions drawn by Surgeon-General Ker Innes.

The first point laid down is "that while certain areas enjoy a complete or comparative immunity from cholera, others stand endemically and perennially, or epidemically and periodically, related to it;" Bengal Proper being, as it were, the permanent seat of cholera, which fluctuates in character and intensity, but is never absent, while in the North-Western Provinces, the Punjab, and Oudh, it is a periodical but never a permanent occupant. There is this further contrast between the two, that when cholera is at its maximum in the one it is at its minimum in the other; but this appears capable of explanation by the fact that the meteorological conditions in these areas are, in some respects, assimilated at the time of the maximum prevalence of the disease in each respectively. The endemic area "may be regarded as the manufactory of that cholera-cause which is periodically to overflow and occupy the other," or epidemic area.

Dr. Bryden affirms that, "during any given year, cholera manifests itself in a succession of outbreaks, interrupted by periods or seasons of dormancy; that in its epidemic or invading form it reappears through a succession of years, the period from its first invasion to its final departure ..... representing the normal life, as it were, of an epidemic, each one of which is but a repetition of its predecessors, the parallels between different epidemics being conterminous with, and as fixed and stable as is, the occurrence of the meteorological conditions in the area invaded."

But in what manner is the disease transmitted from the endemic to the epidemic area? The mode of diffusion is assumed to be atmospheric. "The cholera-cause having no locomotive power in and by itself, must depend for its movement on a vehicle and an extraneous force, the vehicle being moisture, and the force being the wind." This opinion derives some support from the statement that "the first general fall of the rains extinguishes the disease in the endemic area, but fits every other province lying within the monsoon influence for the invasion—or development if the cholera-cause has been already distributed—of the epidemic."

While upholding atmospheric diffusion to be the principal mode by which an epidemic is spread, the operation of other causes, including infection, is not denied. It is only maintained that "it is far from being the fact that any given outbreak has ever stood in the relation of the focus or centre of an epidemic in the same figurative way, as has been represented, that a stone thrown into the middle of a still lake stands to the series of widening circles caused by its disturbance of the water." In support of the opinion that infection or contagion could not satisfactorily explain the spread of the disease, it is stated that, "Looking on Hurdwar as a centre, there is no doubt that the pilgrims who attended the fair proceeded to it from every point of the compass, and if the theory of infection were true, then cholera should have followed in their tracks in an equal number of directions when these same pilgrims radiated outwards to their various homes. This, however, was not by any means the case, for while cholera appeared in a severe and fatal form in the Himalayan tracts to the north and in the Punjab, the country to the south and east has remained free from epidemic cholera."

Dr. Bryden's views are thus epitomised in the paper:—

"Cholera is ever present or endemic in Lower Bengal, and may be diffused or become epidemic every year. When it travels to the north-west the invasion is frequently confined to a natural area, limited by the line of 80° east longitude. It never appears in Northern India before April 20th in any year. Individual cases west of the line of 80°, especially in the last quarter of the year, very constantly precede the appearance of cholera in the following spring. If the Upper Provinces be affected as an area, cholera will last until the third week of September. Experience teaches that a bad cholera in spring is followed by a worse during the monsoon, usually appearing a fortnight after the beginning of the rains. Cholera, epidemic in the east of India, may be entirely diverted from the north-west into Western India. This takes place during the prevalence of the north-east monsoon, in the last quarter of the year.'

In support of these views a brief sketch is given of the progress of the epidemic of 1878 in the Bengal Presidency,

and of that of 1879 in the Punjab, illustrated by a map, diagrams, and tables.

The influence of moisture and of the monsoon upon cholera is deduced from—1st. The constant presence of the disease in the low-lying moist districts of Lower Bengal. 2nd. The exemption of places like Mooltan, unless in exceptionally wet seasons. 3rd. The contrast in cholera and famine years in certain districts; where the crops failed from a relative absence of monsoon influences, cholera did not appear, though prevailing as an epidemic in the contiguous tracts of country. 4th. From a correspondence observed in the difference with regard to cholera and the difference in the meteorological phenomena in adjoining districts contiguous to the line of 80° east longitude.

In discussing the "water theory" of the origin and spread of cholera, evidence is adduced to show that this is not "adequate to cover the phenomena of an epidemic of cholera" as observed in India. With regard to the influence exerted by increased means of communication, it is stated that "the spread of an epidemic has been in no way altered by improved and more rapid means of communication in India; and its course, instead of being with, is against the course of the great natural drainage of the country. It has never happened that an epidemic commenced in the Upper Provinces, and gradually spread down the Ganges, the Jumna, or the Indus, or their tributaries; its advance has been exactly the opposite. And, curiously enough, a series of maps lately issued with the intention of supporting the view that cholera spreads by water as a vehicle, only serves to illustrate an old fact—not that the water was the *vehicle*, but that low-lying places, like those of rivers and watercourses, are favourite habitats of cholera when present."

The practical facts in regard to the disease may be briefly stated as the influence of position in localising it, and the importance of withdrawing troops to neighbouring stations or camps as soon as a case appears. When a number of cases occur simultaneously, the disease will probably prevail, in spite of movements, for eight or ten days. The influence of aggregation as opposed to segregation of individuals, in increasing the risk of cholera; the injurious effect of *continuous* occupation of a building, as shown by the disproportionate number of attacks in a hospital ward compared with a barrack-room, with a common atmosphere which becomes laden with moisture or organic matter; and, lastly, the effect of night duty during an epidemic of cholera, as shown in the greater mortality of the men than of the officers.

The paper does not add much to the knowledge already possessed on the subject of cholera. It certainly tends to show that the disease may be diffused in more than one way—that it cannot be attributed solely to infection or contagion, to water, filth, crowding, or any one cause or condition; but it throws no new light upon its causes. It is true there is some reference to the "cholera-cause," but no explanation of what that is, or conjecture of what it may be supposed to be, is offered. That it is believed to be an entity we may infer from its being stated to have "no locomotive power in and by itself," but of its nature and attributes no indication is given.

Guy's Hospital Reports. Edited by H. G. HOWSE, M.S., and FREDERICK TAYLOR, M.D. Third Series, Vol. XXIV. London: J. & A. Churchill.

To say that this volume maintains the high standard of excellence characteristic of the whole series of these Reports, is to say what is at once the truth and also no stinted praise. We could point to individual numbers of the series containing papers of greater fulness and more lasting value, in which new light has been thrown upon familiar affections, or fresh fields for study have been opened up. It would be difficult to select any one of the interesting memoirs in this volume that could take such a high rank; nor is it to be expected that the staff of any hospital, however gifted and with however great a field for study, will be able every year to produce work of such special merit. But the editors of this volume may certainly be congratulated on having produced a portly volume of nearly 500 pages full of valuable matter. There are two points which must strike even the most casual reader of the volume. One is that the record of the experience of the senior members of the staff is in many instances conspicuous by its absence, and the other is that such a leading hospital as Guy's should be without a fuller and more detailed register of cases under treatment during the year than is published here. Other hospitals with far less resources publish from year to year most valuable analytical statistical tables, to which it would be an insult to compare even for a moment the meagre and therefore almost valueless tables vouchsafed by Dr. Steele.

It is impossible here even to mention all the papers in this volume, and for an enumeration of them we gladly refer our readers to the volume. Reports of single cases of special interest form the subjects of essays by Drs. Taylor, Carrington, and Wright, and Messrs. Lucas and Davies-Colley; while the valuable lessons deducible from a careful study of a series of cases are brought out in memoirs by Drs. Habershon, Goodhart, Savage, and Mahomed, and Messrs. Bryant and Howse. Mr. Bryant recurs to the subject of operative interference for the relief of tension in inflammatory affections of bone, which he treated of in a paper read before the Medical Society of London last year, but he does not appear to add anything to what he adduced then. Dr. Wilks, to whose "Notes on the History of the Physiology of the Nervous System" we turned with anticipation that was not disappointed, traces most lucidly the points in which phrenologists, so often in the wrong, were in accord with the truth which later investigation has revealed. Dr. Fagge deals in a masterly manner with the subject of the "Modes of Dying," and replaces Bichat's classification by one more accordant with our present physiological and clinical knowledge. Probably the essays of the chiefest interest are those by Drs. Goodhart and Mr. Howse on Surgical Scarlatina. The careful series of cases narrated, the one occurring at Guy's, the other and more extended at the Evelina Hospital for Children, cannot fail to be of value in elucidating this subject, which presents so many obvious difficulties. Both authors are convinced that the disease is really scarlatina, modified in some of its details, but not more so than is common in cases of ordinary epidemic scarlatina. Dr. Goodhart believes that a dose of the poison, which might be inert in a healthy individual, finds a suitable nidus for development and increase in the localised inflammations so often met with in surgical cases, and is then able to affect the constitution; as, however, antisepticism minimises these local inflammations, the development of the poison is retarded, and the incubation period of the disease is by so much lengthened when Listerism is carried out. A theory propounded by Mr. Howse, to account for the confusion between scarlatina and septicæmia, must not be passed over without mention. He states that when scarlatina attacks a patient soon after an operation the rise of temperature that occurs prevents the formation of granulation tissue, and favours the rapid decomposition of discharge, and thus renders septic absorption easy. If by the use of antiseptic precautions decomposition be prevented the septic absorption is averted, and the case then develops as one of scarlatina. One obvious objection to this theory is that it supposes septicæmia invariably to result from the contact of decomposing matter with living tissue unprotected by healthy granulations—a

supposition contradicted by pre-antiseptic experience. This volume of Reports incidentally shows that faith in "Listerism" is certainly the faith of the future at Guy's.

New Inventions.

PISTON FOR SYRINGES AND PUMPS.

THIS is an arrangement patented by Messrs. John Weiss and Sons, which obviates the inconvenience attending the use of syringes fitted with ordinary pistons. No packing is required in the special construction adopted. The end or sucker consists of a cup-shaped or cylindrical disc of vulcanite, which resists the action of liquids, and does not become dry. There is consequently no danger of the end of the piston failing to fit tightly in the tube, and so acting imperfectly. The free edge of the vulcanite disc is very thin, and sufficiently elastic to secure a vacuum. The principle of construction is applicable to pumps of all kinds, and will be readily understood on reference to the accompanying woodcut. Fig. 1 shows an hypodermic syringe of the new pattern, Fig. 2 the piston on a large scale. The instrument submitted to us is of admirable make, and the arrangement described commends itself as likely to attain the full advantages claimed for it. The ingenuity of the contrivance will be appreciated; but the practical point gained is that there will be no danger of leakage, or of the passage of air through any interspace between the piston and the tube.

A SIMPLE OPHTHALMOSCOPE.

THE instrument figured in the accompanying sketch (to a scale of one-third) is manufactured by Messrs. R. and J. Beck, of London and Philadelphia, from designs and instructions of Mr. Charles Bader, of Guy's Hospital. The focal length of the glass mirror is seven inches, and either 1·4" or 1·5"

English (35½ mm. or 38 mm.) in diameter. The mirror is not perforated, but has a sight hole of ·15" (4 mm). The framework is of vulcanite, and carries a ledge at back to receive the lenses of the ordinary trial cases. The back of the mirror is dull black, to avoid troublesome reflection, and the object lens supplied has a focus of 2·25 inches (57 mm.)

With a little practice the nature and degree of the various forms of ametropia are almost as quickly recognised with this simple ophthalmoscope as with more complicated instruments. Its other advantages are extreme lightness, its portability, and the facility for using the lenses of the trial case for corrections, instead of the more or less bulky arrangements of many pocket ophthalmoscopes.

HEALTH OF LARGE ENGLISH TOWNS.

FOURTH WEEK OF 1880.

THE severe cold of last week caused a further marked increase of mortality. In twenty of the largest English towns, estimated to contain in the middle of this year seven millions and a half of persons, or nearly a third of the entire population of England and Wales, 5110 births and 4264 deaths were registered during last week. The births were 75 below, whereas the deaths were no less than 989 above, the average weekly numbers during 1879. The deaths showed a further increase of 523 upon the numbers returned in the two preceding weeks, and the annual death-rate, which had been 24·2 and 26·0 in the two previous weeks, further rose last week to 29·7. The lowest death-rates in the twenty towns last week were 16·5 in Wolverhampton, 21·0 in Portsmouth, 21·4 in Sheffield, and 24·1 in Bradford. The rates in the other towns ranged upwards to 31·3 in London, 31·7 in Liverpool, 32·0 in Plymouth, 32·3 in Salford, 34·9 in Manchester, and 35·2 in Liverpool.

The deaths in the twenty towns referred to the seven principal zymotic diseases, which had been 519 and 544 in the two previous weeks, further rose last week to 600; they included 273 from whooping-cough, 127 from scarlet fever, 110 from measles, and 39 from fever, principally enteric. Whooping-cough showed the largest proportional fatality in Salford, Plymouth, and London; measles in Hull, Plymouth, Nottingham and Leicester; and scarlet fever in Norwich and Sunderland. Of the 17 deaths referred to diphtheria in the twenty towns, 10 occurred in London, and 3 in Birmingham. Small-pox caused 12 more deaths in London and in its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. The fatal cases of small-pox in London were more numerous than in any week since the beginning of July last. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 75 and 84 at the end of the two preceding weeks, were 80 on Saturday last; during the week 22 new cases of small-pox were admitted to these hospitals, against 8 and 21 in the two previous weeks.

Under the influence of the severe cold the fatality of lung diseases showed a further marked increase. The deaths referred to diseases of the respiratory organs in London, which had been 455, 512, and 559 in the three preceding weeks, further rose to 757 last week, and exceeded the corrected weekly average by 341, or no less than 82 per cent.; 531 resulted from bronchitis, and 149 from pneumonia. The deaths from these diseases were equal to an annual rate of 10·8 per 1000 of the population in London; in Liverpool the rate from the same diseases was equal to 11·2 per 1000.

THE USE OF MOLASSES AS AN ANTI-SCORBUTIC.

To the Editor of THE LANCET.

SIR,—The suggestion made by Mr. Cullimore in your impression of this week, that molasses or treacle should be added to the dietary of those suffering from famine in Ireland, may possibly, I think, prove useful. In my article on "Scorbutus" (Reynolds's System of Medicine, 1866) I referred in the following terms to the experience of the Confederate Army during the American War:—"Syrup from the Chinese sugar-cane (sorghum), abundantly manufactured in the last two years of the war, was issued as a ration with decided benefit. When badly made it is liable to fermentation and deranges the bowels; yet even in this condition it was of great service in scorbutic cases, as was also the extracted juice before being boiled."

I cannot, however, subscribe to Mr. Cullimore's opinion that "the antiscorbutic property of the potato is due to the large quantity of sugar it contains."

Yours faithfully,

Grosvenor-street, February, 1880. THOMAS BUZZARD.

WICKLOW GAOL.—As this prison will be closed on the 31st March, the services of the medical officer will be dispensed with and his claim to superannuation considered. The gaol will be converted into a bridewell.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 7, 1880.

WHEN we speak of Medical Reform as an urgent public question, we do not, of course, allude to those proposals for reconstructive change which have so long been pressed on the attention of Parliament in the interests of the medical profession. These have their public bearing, being necessary in order to protect the community from the misleading self-representations of pretended or pretentious practitioners. It is, however, of more general matters we speak. There is reason to fear that when the Prime Minister enunciated his famous aphorism, "Sanitas sanitatum, omnia sanitas," he uttered the sentiment in very much the same spirit as that which possessed the mind of the preacher who propounded the original epigram. It was, in truth, a melancholy reflection coming from a mind seeking rest and longing to be free of the trouble and turmoil arising, or likely to arise, from an overweening carefulness for the health of the population. It is not difficult to imagine a statesman, oppressed by the foreboding that a hydra-headed question like that of medical reform—in its broadest sense—awaited solution, regretfully exclaiming against the persistent and ubiquitous character of the threatening apparition by which he was confronted. It is easy to see how disturbing this essentially modern element of State policy may well prove to a responsible Minister, when not even may an expedition be despatched to search for the North Pole, or a small army be sent to make war on a nation of savages, without the one being burdened with the duty of carrying and consuming lime-juice, and the other, perforce, provided with a retinue of doctors and being attended by an organised staff of hospital helpers. When no department of home legislation or local administration is free from the spectre of medical reform—or reform in a medical sense—there can be little cause for wonder if the head of the Government exclaims, plaintively, or even with a measure of petulance, "Sanitas sanitatum, omnia sanitas!" We begin to think that those who have tried to construe this utterance in a different fashion, and to interpret it as an expression of policy, or at least a recognition of expediency, must have been labouring under a misconception, and accordingly almost deserve to be disappointed!

The time is not, perhaps, come for a bold and general acceptance of the doctrine that health, physical and moral, defensive and actual, is the basis of prosperity. Disease has, until recent times, been recognised as an accident of life, and the aid of medicine sought only to *cure*. We are now asking that health preservation shall be regarded as a matter of common life, and incorporated as an integral part of the policy of a Government. We are insisting that in every measure submitted for the consideration of the Legislature, and in every act of administration performed with the sanction of the Government, the interests of health shall be treated as paramount. It is impossible to conceal the fact that these demands strike at the root of Ministerial independence. In times gone by it was enough to satisfy the utmost requirements of wisdom in statescraft if, before a war was declared the odds against us were carefully counted, or if when commencing to build a city the means were secured to finish it. Now, the health of the army and the sanitary requirements of every scrap of house-property are added to the cares of the promoter of a strong foreign policy, or of improvements at home. Notwithstanding the efforts which have been made, and are in progress, to educate the community at large, and Parliament in particular, in reference to subjects of this nature, the medical profession is probably, we say, too sanguine in supposing that public opinion, as reflected in the views of the Government and the Legislature, is prepared to yield compliance with the demands we are making, or even able to perceive their cogency. We must be resigned, if not content, to see the rational and humane overtures of science flouted, and its professors treated with contumely, until a better spirit takes possession of the public mind, and the *vis inertiæ* of constituted authority, intensified by tradition, has been surmounted by the force of sturdy and remorseless facts.

Nevertheless, time is short and the need urgent. The "impossible" *will* come to pass, and statesmen will be brought to see that in a practical and true sense *sanitas est omnia*. It would be difficult to name a subject of public interest in which the health question does not crop out more or less conspicuously. In the face of this fact, how is the Government advised? To what quarter may the Legislature look for enlightenment, or, if it is unconscious or neglectful of the obligation to seek illumination, whence will light break on it? These are pertinent inquiries, and at the outset of a new session, short and meagre as it well may be, we venture to think they deserve very serious consideration. Suppose, we say, the Government or the Legislature should chance to feel its need of medical counsel, from *whom*—that is the way to put it—can trustworthy and in every way competent advice be obtained? Before we vehemently condemn a Government for not taking counsel on topics of medical reform, it is only fair to ask whether an authority above the level of a suppliant for some boon, and at the same time able to command the respect of public opinion and the profession—really exists? The Medical Council is clearly not such a body, for it is just now on its knees begging for life, and clemency for its many omissions. The Royal College of Physicians is not such a body, for it has no aptitude for scientific energy or progress; and every other medical corporation is in the same condition. Added to which, there is the not unimportant circumstance to bear in mind, that all these bodies, from the Medical Council downwards, are constituted for, and *ought* to be engrossed with, the subject and purposes of professional education, and they have no special qualification for the task of framing or giving general advice. There are, of course, the medical officers of Departments; for example, the Local Government Board, the Army, and the Navy, have their medical officers, and some of these gentlemen command the confidence of the profession and the public, and are well able to advise; but the fact that they are officers of Departments obviously cripples their independence and limits the practical value of their counsel. A standing Board or Council, to which the Government of the day and

either House of Parliament might repair for scientific information and advice on subjects of public health, is urgently needed. If the present Ministry is not prepared to constitute such a council, some other Government will hereafter feel itself compelled to have recourse to this obvious expedient. A Department of Public Health *must* be formed, whether or not the edifice of medical reform be completed by the appointment of a Minister of Health! It should neither be costly nor difficult to provide a small council of representative members of the medical profession, selected for their special knowledge of branches of health work, and deliberating under the presidence of a political moderator, as in the case of the Council of the Secretary of State for India. We commend this suggestion to the Government and the Legislature as a ready mode of securing what is just now so greatly needed,—namely, a trusty and experienced but unprejudiced guide through the labyrinth of medical reform. The policy of the moment is, we know, to avoid the maze instead of tracking it, but, unless we are greatly mistaken, that policy cannot be much longer pursued.

DR. LYON PLAYFAIR, it will be remembered, at the last meeting of the Select Committee on the Medical Acts, asked the Registrar of the General Medical Council for a table to show how far the regulations and practice of the medical licensing bodies are in accordance with the recommendations of the General Medical Council on education and examination. Tabulated returns to this effect are now before us, and they constitute a valuable contribution towards a right understanding of the efficiency and the authority of the General Medical Council. The General Council is a representative body, not as regards the medical profession, but as regards the bodies which assume to regulate and represent the profession and the universities. It might have been supposed that a Council so constituted would recommend with a weight equal to a command. The data before us enable us to see how far this is so. Around the table of the Council the representatives of the various bodies express the greatest regard for its decisions, but when we go into detail we find ample proof of the assertions of those who declared that the most important recommendations of the Council are often unheeded. The returns show that the General Medical Council has issued about thirty-three recommendations. In some of the answers of the Irish College, contained in these returns, the College expresses its regret that certain of the recommendations were not of a mandatory character, and it set forth that the representative of the College had endeavoured in the Council to get the said recommendations put into a compulsory and mandatory form. It is curious to see both the College and its representative forgetting that the Council has no power to compel or to command. It may tell off half of its most eminent members, representing all the great corporations and universities in the land, to make inquiries, extending over months, and to formulate recommendations founded on such inquiries. Half the recommendations will not be adopted, and half of the half that is adopted by the General Medical Council will be found years after to be not acted on by the bodies. This was the allegation made in the damaging evidence against the Council before the Select Committee. It is now demonstrated to be true. The return, indeed, does not deal with the great reports and conclusions of the principal committees of the Medical Council, though it is clear that the conclusions of such committees are entitled to the utmost weight, and the case against the Council is not complete unless they are taken into consideration. But dealing only with actual recommendations of the Council, what are their practical force?

We cannot, of course, give the details of the loyalty of the bodies to the thirty-three recommendations. We can only take a general view of their treatment of them.

The chief recommendations are to the following effect:—That preliminary examinations should include certain subjects; that preliminary examinations should be left to universities and bodies engaged in general education; that the licensing bodies should report decided ignorance in subjects of general education; that the course of study for a licence should be at least four years; that the licensing bodies should not exact more than one course of lectures on any one subject; that an examination in nine specified subjects should be regarded as indispensable before obtaining a registrable qualification; that the licensing bodies should encourage students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character; that they should require evidence of special teaching in vaccination; that an examination in the earlier subjects of professional study should take place before the end of the first year of study; that written questions should be put by the whole body of examiners; that higher degrees or qualifications should only be granted on evidence of higher professional attainment; that there should be a limitation and definition by schedule of the extent of examination in certain subjects of the curriculum; that observations with the microscope form part of the examinations; that evidence be adduced by candidates that they have had opportunities of practical study in hospitals, dispensaries, or elsewhere, with care of patients; that dissections and operations constitute part of examinations. These are very good recommendations as far as they go. Yet they touch only the very fringe of the subject of Medical Education and its methods. But the returns show that the individual bodies receive or disregard them according to their own pleasure. Perhaps the Royal College of Surgeons is as great a delinquent as any other body. From its answers we gather that it does not comply with about eleven out of thirty-three recommendations, some of the most important of these included. Thus the recommendation not to exact more than one course of lectures on one subject "has never been brought under the consideration of the Council of the College!" Again, the Council of the College has expressed its concurrence in the nine necessary subjects of examination, but it examines in only five. It omits all tests of knowledge of Chemistry and Physics, of Medical Anatomy and Clinical Medicine, of Materia Medica and Pharmacy, of Pathology, of Midwifery, and of Forensic Medicine! It does not conform to the recommendation of the Council in favour of an examination at the end of the first year. It does not comply with the recommendation in favour of a definition of area in subjects of examination. It considers it conforms to the recommendation in favour of requiring proof of having seen medical practice by requiring candi-

dates to act as dressers! It does not comply with the recommendation requiring candidates to dissect or operate in the course of examinations. In short, it does not comply with the recommendations which represent the principal discussions and work of the Medical Council. So very much with the other bodies. The answers of the Scotch bodies are in many respects remarkable. This is especially the case with their answers to the recommendation that higher degrees and qualifications should only be granted on proof of higher attainments. This is a very shaky point with the Scotch corporations. The Edinburgh College of Physicians makes a very extraordinary remark. It expresses its opinion that evidence of professional and social standing is a better test for higher qualifications than additional examinations! Surely, if this be so, examinations might be dispensed with altogether, and merit determined by the public—"by professional and social standing"! Almost equally remarkable is the reply of the Edinburgh College of Surgeons, whose able representative explained to the Select Committee that his College gave fellowships on a system of payment *plus* testimonials, which are notoriously easy of production. But in the returns before us the College dismisses the delicate subject with these words: "The College attends to this recommendation." The Irish bodies show an equally independent spirit, and take as many of the recommendations as they approve and reject the rest. We see, by the way, no answers at all from the Queen's University, which, under the lead of the lamented Sir DOMINIC CORRIGAN, was especially famous for its bold independence. The returns are an unanswerable argument for giving the Council power, and insisting that it should take it and use it in the interest of the too little considered medical student.

THE universal testimony of experience approves the well-known dictum that every foreign substance that gains admission into the living body, or that is engendered within it, no matter what its origin or its nature, must become organised or absorbed, eliminated or encysted, if it is not more or less seriously to prejudice health or to destroy life. In one or other of these modes does Nature endeavour to preserve and protect living tissues from violent reaction, disorganisation, and death. Not unseldom, however, she signally fails, and has to call in the aid of Art. No better illustration of this can be adduced than that of stone in the bladder. If the peccant substance be over a certain size, Nature's unaided efforts are ineffectual to procure relief. Organisation of a vesical calculus is impossible; absorption doubtful; elimination rare and uncertain; encystation accidental, painful, and hazardous. Surgery alone may be trusted to act intelligently and safely. This truth has long been recognised. The earliest records of the surgical treatment of stone in the bladder belong to times now very remote. The operation of cutting for stone is one of the oldest in history, and reigned for at least two thousand years without a rival. Its supremacy remained unquestioned until the beginning of the present century, when the practice of crushing through the urethra was introduced. Then for fifty years crushing steadily grew into more and more esteem, and the reputation of cutting dwindled in a corresponding degree, till at length the more sanguine advocates of lithotrity confidently prophesied the final abandonment of lithotomy as uncalled for and unnecessarily severe. In the opinion of cooler minds, however, the ultimate triumph of lithotrity was not so sure. Little by little the uncompromising lithotritists had to change their position; the cutting and the crushing operations were no longer antagonistic but complementary, provided always that lithotrity was to be the rule and lithotomy the exception. With this avowal lithotrity lost much of its prestige, and was not likely again soon to recover its old status. Its good name had been called in question, and there were those who were not slow in dragging to light some of its drawbacks and disadvantages. Every year the advocates of the newer operation had to make more and greater concessions to the champions of the older; and, in spite of the oft-repeated unparalleled results of the professed lithotritists, a distinct reaction began some two or three years ago to set in towards the cutting operation. About that time, however, an unexpected event occurred which called off attention into another direction. Professor BIGELOW, of Harvard, U.S., proposed and introduced an entirely new method for the removal of stone from the bladder—namely, by complete crushing and continuous evacuation of the fragments by means of aspiration. This method he designated "litholapaxy."

We have called Professor BIGELOW'S method an entirely new one, and such we believe is its true character, notwithstanding the attempts that have been made to explain away its significance or to destroy its originality. Litholapaxy can appear as a mere modification of lithotrity only to a superficial observer. The philosophical student will not fail to discover an essential and fundamental difference of principle. Apart from the irreconcilably opposite modes of procedure, in crushing a stone after the manner of professed lithotritists, and in removing it by Professor BIGELOW'S plan, there is no real analogy whatever. Lithotrity, as ordinarily practised, is an operation of least interference; the calculus is crushed at one sitting or at many sittings into fragments small enough to be passed, *per vias naturales*, by the expulsive efforts of the bladder and abdominal muscles. In other words, a rude attempt is made to reduce a large calculus into several small ones, which may be passed spontaneously. Litholopaxy, on the other hand, is a radical operation, and aims at breaking up the whole of the calculous mass and removing it at once by powerful but systematic aspiration. In the one the calculus is broken, and then Nature is left to get rid of the irritating fragments as best she may; in the other the comminution and the removal are alike accomplished by mechanical means. It is in vain that efforts are made to establish identity between the aspirator employed for the entire removal of all the fragments of stone in the operation of litholopaxy, and the weak and inefficient suction-bottles made use of to remove the finer débris in the operation of lithotrity. One frees the bladder from all foreign matter, the other removes only the soft pulverulent particles, and allows the larger hard and angular fragments to come into closer and rougher contact with the mucous membrane lining the interior of the bladder.

In the interests alike of science and humanity it is right that these important truths should be distinctly and empha-

tically stated. Almost every observer who has recorded his experience of Professor BIGELOW'S method has made confession of a preliminary repulsion which only success in application has modified or removed. The plan is still on its trial, though so far eminently satisfactory. Those, on the other hand, who had the largest opportunities of using the suction-bottle for the removal of the finer débris, after ordinary lithotrity, were almost unanimous in asserting that, as a rule, it was better to do without it. And probably this apparent paradox may, after all, contain a kernel of truth. It is not difficult to conceive that unless all fragments can be removed, it is better to let the pulverulent matter remain behind, as a soft pultaceous sediment to protect the tender walls of the bladder from actual contact with the large and sharp fragments that cannot pass through the small tube that is used in CRAMPTON'S or CLOVER'S bottle. This may be the true but hidden reason why the suction-bottle was not approved by the best lithotritists, and it may likewise afford a clue to the success of Professor BIGELOW'S bold and ingenious device.

THE National Board of Health of the United States has issued its first annual report—the report of its work in 1879—as a supplement to the last published of its weekly "bulletins." The report is in every respect a document of exceptional interest. It proves that in our observations on the Board when first formed we rather underrated than overrated its importance in advancing public health administration in the United States. It would be difficult to say whether, in the short period of its existence, it has proved of greatest advantage to the States as a co-ordinating, an advisory, or an active working agency, for it has been influential in each of these directions, and in each has amply justified its creation, and shown the need for it. The report describes in some detail the various works the Board has been engaged in during the year, and in so doing presents a view of the actual position and future requirements of public health organisation in the United States of much interest. And, first, it has been actively engaged in collecting information and advice from the principal sanitary organisations and sanitary labourers of the United States as to the best plan for a national health organisation, including the subject of quarantine, both maritime and inland, and the relations which should exist between State or local systems of quarantine, and a national system. So far as this work has proceeded, it tends to show that the Board has the confidence of the most influential existing public health organisations in the States, that its plan of procedure is fully approved by them, and that eventually it will be in a position to devise a comprehensive and much-needed national public health system. Next, the Board has been endeavouring to initiate what may be termed a detailed sanitary survey of the principal cities and towns in the States, and with no inconsiderable success. In addition to these more general aims the Board has instituted certain special inquiries by investigators selected for the purpose. These inquiries include a commission to investigate yellow fever in the island of Cuba (the Havana Commission so-called, to which he had occasion to refer a short time ago); researches into the best method of determining the amount and character of organic matter in the air; an inquiry as to the effect of disinfectants, distinguishing those which are the subject of patents; other inquiries include the adulteration of food and drugs, the diseases of food-producing animals, the flow of sewers in relation to their sizes and gradients, sanitary surveys of the eastern coast of New Jersey bordering on New York Harbour, and of the city of Memphis, Tenn., where yellow fever was lately so fatally prevalent; the hygiene of the mercantile marine, diphtheria, and the influence of various soils upon sanitary work in regard to drainage and the disposal of excreta. Reports on several of these inquiries have already been presented to the Board, and their publication will be looked for with quite as much interest in this country as in the United States, and this not only on account of their subjects, but also because of the distinguished names of the several reporters.

In addition to the above large array of subjects, the Board has caused to be collected and collated the sanitary laws of the United States and of the several States, including not only the statutes, but the decisions of the several courts on all questions involving the public health. This great work, it is stated, is completed, and authority is sought for its printing and publication.

But even the vast amount of work here indicated seems scarcely to make an impression upon the apparently inexhaustible energy of the Board. By far the larger portion of the report is taken up with the question of "Quarantine" in its local and international relations, and the "Yellow Fever of 1879." Both these subjects will demand separate consideration, but with respect to quarantine it may be briefly said here that the National Board of Health gives to the United States a body which is enabled to discuss the subject adequately in its international relations. It is not easy for an inhabitant of this kingdom readily to apprehend the view in which quarantine presents itself to the inhabitants of the United States, and it would seem as if the term there were being used with a most undesirable and misleading latitude. To this question, however, we shall recur. Meanwhile we would express our hearty gratification at the unquestionable success of the first year's administration of the National Board of Health of the United States, and the earnest this affords of a prosperous and brilliant future.

NOW that Parliament has met, it is impossible that the Government can much longer delay offering some explanation of their reasons for the course they recently took in filling the vacancy created by the resignation of Major GRAHAM, and stating their intentions with regard to officially recognising the eminent services of Dr. FARR.

In acknowledging copies of the resolutions recently passed at a meeting of the South London District Metropolitan Counties Branch of the British Medical Association, the Premier, through his private secretary, states that he is "highly sensible of the eminent services rendered by Dr. FARR during his past career, that he well knows how to appreciate them, and that Her Majesty's Government had excellent reasons for the course which they considered it their duty to take." The Government will need all possible ingenuity to substantiate their "excellent reasons" for passing over in silence Dr. FARR'S claims to succeed Major GRAHAM, and for appointing Sir BRYDGES HENNIKER in his place. It appears, indeed, difficult to justify the

conduct of the Government either to Dr. FARR or the public. Many months ago, when Major GRAHAM's resignation was officially announced, Dr. FARR became a candidate for the appointment of Registrar-General. His reasons for this were more recently explained by him in the following words, in a letter addressed to *The Times*:—"Although warned by the recent state of my health that I was in want of rest rather than of increased duties and responsibilities, I was induced by the hope of enlarged opportunities for rendering assistance in the approaching Census, and in the promotion of public health and sanitary statistics, to become a candidate for the post." The Premier, in reply to his application, promised Dr. FARR that his claims for the appointment should at the proper time receive his fullest consideration. When, however, the post really became vacant, it was bestowed upon Sir BRYDGES HENNIKER, without even a courteous expression of regret to Dr. FARR for "the course which they had considered it their duty to take." It will not be difficult for the Government to assign Dr. FARR's declining health as their reason for withholding from him his much-deserved promotion; bearing in mind, however, the manner in which the appointment has been filled, it will not be easy to believe that Dr. FARR has been generously treated, or that the public has benefited by the way in which the Government have performed their duty. From another point of view some explanation should be forthcoming of the reasons which have induced the Government to adopt a course with regard to the Registrar-Generalship of England so different from that which governed their appointment of the last two Registrar-Generals of Ireland, who have both been medical statisticians. If Dr. FARR had been appointed Registrar-General a considerable saving of public money would have been effected, similar to that which had already resulted from a similar arrangement in Ireland. The opportunity of suitably acknowledging and rewarding the eminent services of Dr. FARR, which Lord BEACONSFIELD "well knows how to appreciate," did not, however, outweigh the personal considerations and interest to which Sir BRYDGES HENNIKER owes his appointment. The state of Dr. FARR's health affords ample grounds for his resignation when he found his claims passed by unnoticed; it supplies, however, but a shallow pretence for the course which the Government has chosen to adopt in the matter. Such a plea might have been more easily justified on the ground of the requirements of the post, if special qualifications had marked the successor to Major GRAHAM. Under present circumstances, however, such a plea is worse than untenable. In connexion with the suggested explanation of the Premier's "excellent reasons" for appointing Sir BRYDGES HENNIKER in preference to Dr. FARR, it may be noted that Dr. FARR read a paper at the Royal Society on Thursday evening, the 29th ult., on the Fecundity of English Women at Different Ages, containing tables which form a valuable contribution to vital statistics.

SURGEON-MAJOR BELLEW, C.S.I., who has been employed as a political officer with General Roberts' army in Cabul, has been compelled by ill health to return to India, and left Sherpur with a convoy of sick and wounded under Surgeon-Major Low, for Peshawur, on the 26th December.

Annotations.

"Ne quid nimis."

A GOVERNMENT BILL ON LUNACY LAW REFORM.

IT is with great satisfaction we find in the Queen's Speech a promise that a Bill "for consolidating and amending the Lunacy Laws" shall be submitted to Parliament. This places the adoption of a measure of some scope and value on this important subject beyond question. It remains to be seen how far the anticipations of the profession, and the hope of the public for a final adjustment of this long vexed question, will be realised.

DEATH OF SIR DOMINIC CORRIGAN, BART.

WITH much regret we have to announce the fatal termination of the malady under which Sir Dominic Corrigan, Bart., has been labouring for the past five weeks. The distinguished baronet expired on Sunday morning last at his residence in Merrion-square, Dublin. A notice of the life and labours of the deceased physician will be given in our next number.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE first meeting of the new Council was held at the Mansion House on Monday last. The Lord Mayor presided, and spoke hearty words of sympathy and determination to support the fund as his predecessors had done so powerfully. The attendance was of that highly representative character which shows how strong is the hold which this movement has on the religious world. The chief business was the reappointment of committees. The committees were almost unanimously re-elected, two or three vacancies by death or resignation having to be filled up. The conspicuous vacancy was that in the Distribution Committee, caused by the lamented death of Mr. Callender. It was filled up by the appointment of Mr. Alfred Willett, who succeeds Mr. Callender in St. Bartholomew's. There can be but one opinion of Mr. Willett's fitness for this duty, but we regret that occasion was not taken to vary the representation on the Distribution Committee. St. Bartholomew's is already represented by its able treasurer, who by merit and by his early labours in originating the fund, has an influence in its councils such as does not require the support of a colleague. The Distribution Committee would be the better for a little fresh blood.

RECENT DEATHS AND THE GENERAL DEPRESSION.

IT is impossible to throw off the feeling of anxiety produced by the number of recent deaths occurring with startling suddenness in the course of diseases which scarcely seemed to assume the gravest type of development before a fatal issue was reached. There can be no doubt but that the long continuance of a low temperature, with first wet, then snow, and for some days in succession heavy fogs, has seriously depressed the vitality of all except the most vigorous constitutions, and possibly a few invalids who are so engrossed, as it were, with some special malady that they have no sensibility left for the weather. There is certainly a state in which a dominant disease holds the citadel against other aggressors. The "depression" generally experienced gives ground for alarm, and should induce everyone to practise more than common carefulness in the avoidance of gastric disturbance, exhausting labour, and cold. It is not enough in such weather as we are experiencing to live simply and wisely: it is indispensable to live *well*. The food

taken ought to be especially nutritious, and it should be easy of digestion. Stimulants, except for temporary purposes, unless taken as a matter of habit, should not be relied upon as aids to strength. The reserves of potential energy are so low just now that it is required to economise the stock rather than to call upon it for special effort by the use of a stimulant. The horse is weak and weary; it is useless to ply the whip. Better go cautiously and strive rather to replenish the strength of the body than to excite the nervous or muscular system to additional work. The vital force must be treasured carefully, and it is clearly the duty of every brain-worker to protect himself, as much as possible, from the peril of expending the last remains of mental energy while he thinks he is only "sticking to work." The force, whatever it be, which puts the mind into action also energises the body with its complicated system of organs and apparatus. It is impossible to consume the strength in one direction without depriving other parts of the organism of their due supply of energy. Therefore, the man who will labour excessively with his brain must not be greatly surprised to find himself weak in other regions of the body. Weakness means inability to cope with the enemy ever lurking to do mischief to the mortal nature. When the strength of health is diverted from the body as a whole, by being used up recklessly in some one of its parts, the system is left unprotected and any organ with a latent weakness, perhaps, compensated in average health, is exposed to injury in the way determined by weakness of function or by disease. The danger is not difficult to understand; nor is the measure necessary for self-protection far to seek, though in the exigencies and vicissitudes of daily life it may not be always easy to carry into effect. Moderation in, yet sufficiency of, food and exertion, with the greatest prudence and cheerfulness in self-conduct, constitute the policy of health preservation, and more especially is it indispensable that such a policy should be carefully followed out. Late hours, exhausting pleasures, oppressive labour, and worry, are the enemies that make "depression" a danger and potent cause of untimely death.

ARMY MEDICAL DEPARTMENT.

THE *Standard* of the 29th January stated that "the Secretary of State for War, on the recommendation of the Director-General of the Army Medical Department, has consented to allow Surgeon-General J. H. Ker Innes, C.B., to retain his appointment of Principal Medical Officer of the Army in India beyond the period when retirement is rendered compulsory. Mr. Innes attained the age of sixty years on Tuesday last, and should, therefore, at once retire; but his exceptional ability has brought him so frequently to notice that it is considered for the good of the service that he should be retained." It is much to be regretted that our contemporary did not take the trouble to verify this statement before publication. If it were true that this step had been taken "on the recommendation of the Director-General of the Army Medical Department," we should concur with the *Army and Navy Gazette* in denouncing it as an act calculated to lower the department in the eyes of the profession, and to cast merited obloquy on Sir William Muir. But we happen to know that this statement is in some essential particulars incorrect. More than three months ago Surgeon-General Crawford was put in orders to proceed to India to relieve Mr. Innes. A strong recommendation came home from the Commander-in-Chief in India, supported by the Governor-General, that Mr. Innes should not be removed while active operations were going on in Afghanistan. To this recommendation it would have been difficult for the authorities at home to withhold their assent. With great reluctance on the part of the Director-General, Dr. Crawford was ordered to Madras instead of Bengal, but on the distinct understanding that, as soon as the exigencies of the service should permit, he was to be moved to Bengal to relieve Mr. Innes. At the time of the change of Dr. Crawford's destination, we were cognisant of the circumstances by which it was caused, but did not consider it necessary to comment on what appeared to be almost an unavoidable contingency. Now that affairs in Afghanistan are more quiet, we feel satisfied that the promise given to relieve Mr. Innes as soon as possible will be at once fulfilled, and Surgeon-General Crawford be installed as Principal Medical Officer of the British troops in India. While we are disposed to give, and have on all occasions given, Surgeon-General Innes all due credit for the manner in which he has conducted the medical service, under circumstances of considerable difficulty, we feel that his removal will not cause any detriment to the service or to the Department. Those who have known the manner in which Dr. Crawford discharged the duties of Head of the Medical Branch at Whitehall-yard, and his subsequent career as Deputy Surgeon-General in Bengal, can have no fear for the result. He is a very able administrator and a popular officer. Under him we have no doubt the duties will be carried on as efficiently and as pleasantly as it is possible for them to be done. We shall only add that for the breach of the Warrant in not placing Surgeon-General Innes on the retired list on reaching the regulation age the military authorities in India, and not the Director-General at home, are responsible.

SMALL-POX AT BATH.

IN our impression of the 17th ult. we gave some information relative to an alleged "lamentable insufficiency" of hospital accommodation in Bath, relative to recent prevalence of small-pox there, and expressed a hope that this information was erroneous or exaggerated, notwithstanding we had much confidence in our informant. Last week we printed letters from the medical officer of the Bath Workhouse (Mr. Robert Biggs) and the medical officer of health for the borough (Dr. Brabazon), the former gentleman deprecating any blame in regard to the action of the guardians during the recent outbreak, who, as he justly observes, had dealt in "a large-hearted and practical way" with a difficulty which it is obvious had been thrown upon them by the extraordinary action of the Town Council—the health authority (!) of the borough; the latter gentleman giving an unqualified denial to the statements of our informant. This week we print a copy of a report bearing upon this subject adopted by the Board of Guardians, and an extract from Dr. Brabazon's annual report for 1879, giving an account of the outbreak of small-pox in question. From these reports it appears that the Town Council abnegated its sanitary functions in regard to the poorer and pauper population of its district, indirectly compelling the guardians (who have no sanitary functions in respect to Bath) not only to make hospital provision for pauper patients, but to pauperise some of the sick by making them poor-law patients; and this policy was so successfully followed that, of 80 cases of small-pox removed to hospital, 21 only were dealt with by the Sanitary Authority, and 53 by the Poor-law Authority! Certainly the Town Council wish to take credit for having received four "urgent" cases into their hospital who could not pay them; but what credit should be given to them for practically compelling the guardians to receive within the precincts of the workhouse, occupied by 700 persons, numerous cases of small-pox? Mr. Biggs thinks our information contained a misapprehension as to the hospital provision for infectious diseases at the workhouse. But he himself confirms its accuracy. The small "cottage" we referred to is clearly the infectious disease hospital of the workhouse; and the emergency of having to obviate the shortcomings of the Sanitary Authority in the recent small-pox epidemic was met

by giving up wards in the workhouse buildings, themselves destined for other purposes. We shall be curious to know what the Local Government Board will have to say to this revival of an objectionable feature of workhouse management. Dr. Brabazon designates our information as "untrue and groundless," and even suggests that we have been made the victims of a "mendacious hoax." Yet in his report, from which we have quoted, he tells us that no provision whatever for small-pox was made in the Sanitary Authority's hospital for infectious diseases, and that at the beginning of the outbreak of small-pox, "in consideration of being intended for other diseases, he wished to keep it (the hospital) intact as long as possible." Moreover, when he could no longer refuse to admit small-pox, it became necessary to *exclude* other infectious diseases, measles at that time being frequent and fatal in the city, and scarlet fever reported. Thanks to the action of the guardians it seems never to have been necessary to use all the hospital accommodation that in the end the Sanitary Authority provided; but it is difficult to see how this redounds to the credit of that authority. It is for the first time we learn that a good road and a beautiful view are to be regarded by patients and friends as a sufficient set-off against the inconvenient distance at which a hospital may be placed. We need not pursue this matter in further detail. Our readers have now before them the data from which they themselves can judge as to the accuracy of our information given on the 17th. We have here the extraordinary spectacle of the Sanitary Authority of the most aristocratic inland health-resort of the kingdom depending upon the Poor-law guardians for the performance of the major part of the most important of its duties as to the prevention of the spread of infectious diseases among its population; and we have the still more extraordinary spectacle of a Board of Guardians exhibiting a larger and deeper interest in the sanitary welfare of the resort than the Sanitary Authority—the Town Council—itself. Surely this perversion of law and principle will not be permitted to pass without some inquiry on the part of the Local Government Board. The sanitary administration of Bath is not a matter of mere local interest. The vast number of persons who flock there in search of health from year to year have a right to be assured that the search shall not be frustrated by neglect of the Sanitary Authority, whether of omission or of commission. Happily, visitors of health-resorts are becoming more alive to the duties of sanitary authorities, and we cannot affect regret that the shortcomings of the Town Council of Bath have not been without their effect in producing a "scare" among their visitors.

ATAXIC ARTHROPATHY.

THE osseous and articular changes occasionally occurring in the course of locomotor ataxia have for some few years past attracted the attention of our French *confrères*, by whom it has been fully discussed. But in this country it has been almost unnoticed, and Dr. Buzzard has done good service in calling attention to it so prominently as he did at the last meeting of the Pathological Society. Dr. Gowers showed a good specimen, and the President showed several excellent casts presented by Professor Charcot. We shall doubtless soon have more cases and specimens exhibited; and, as always happens in such cases, we shall get to wonder that the disease so long escaped notice. At first sight the changes in the joints bear a very close resemblance to those of chronic rheumatic arthritis, but the evidence in favour of their special nature adduced by Dr. Buzzard appears convincing. According to our present knowledge, the affection usually sets in early in the course of the ataxia, and is at first marked by great, very great, effusion into the synovial cavity of the joint, and in many cases also under the deep muscles of the limb. This is in general rapidly followed by complete destruction of the joint: the ligaments are relaxed, cartilages eroded and soon completely worn away, and the articular ends of the bones rapidly absorbed. The joints become misshapen, loose, and often dislocated. These changes take place painlessly, and the irregular, loose, flail-like movements can also be accomplished without any pain. In addition to these joint changes, the affected bones are subject to spontaneous fracture, either in their shafts or near the articular ends. There is often a very abundant callus uniting the fragments, which may envelop all the deep structures in one unyielding mass; but when occurring at the neck of the femur the fracture remains ununited. While, in the main, as Mr. Butlin pointed out, there is an absence of osteophytic growths round the joints, the specimen exhibited by the President of great osseous enlargement of the great trochanter of the femur, and the cases shown by Dr. Buzzard, in one of which one trochanter was greatly enlarged, whilst the other case presented ossification of the rectus tendon, prove that such outgrowth of bone may be present. The rapidity and painlessness of the process, and the marked atrophic changes met with, are characteristic of this affection. Dr. Buzzard suggested that the cause might be found to lie in some lesion of the medulla oblongata, and although Mr. Macnamara's observations threw some light on the probable course of the articular changes, they by no means negatived the suggestion. The probable nervous origin of the allied condition of chronic rheumatoid arthritis was insisted upon by Dr. Ord in a communication to the Clinical Society last year.

POISONING BY "NOSTRUMS."

THE subject of the abuse of veiled narcotic remedies is one of such importance as to demand continued attention until it is in some way brought to a check. The recourse to "nostrums," whose constitution is but little known even to the vendors, and not at all to lay-purchasers, is mainly responsible for this evil. Deceived in many instances by a neutral name, or one which gives no clue, to the real nature of the compound, sufferers from real or imaginary diseases resort to drug-drinking who would not indulge in the fatal habit did they know what narcotics they were habitually taking. Opium, morphia, prussic acid—these and other sedatives form an integral part of many an apparently harmless "soothing syrup," "cough-elixir," and the like. Probably there would be much virtuous indignation expressed by those who indulge in those things (and, judging from the demand, there must be a very large number who do) that they are no better than opium-eaters or morphia-maniacs. That, of course, would be the bare truth, but such persons would be the last to realise it in its nakedness. There are, no doubt, great difficulties in the way of reform in this direction, and the Pharmaceutical Society has been (perhaps with reason) blamed for not being more active in employing the powers it possesses. What comes clearly out of the whole matter is the necessity for such legislation as shall get rid of the secrecy attaching to the patented medicines. To imagine that they are compounded in an unknown and mysterious manner, of materials which are equally rare and secret, is an absurdity and an anachronism in these days.

We have so recently commented on this matter that it may seem almost superfluous to advert to the equally grave cognate subject of indulgence in chloral and morphia, openly or in secret. But we feel constrained to do so, if only to draw attention to the striking verses which appeared last week in the pages of our esteemed contemporary *Punch*, who, under the guise of pleasantry, has often done good service in striking hard at social abuses. The lines we refer to must have been read by many with a painful interest.

Opening with the praise of chloral as the great pain-destroyer, the "ode" closes with a view of the other side of the picture, and shows how great is the evil that arises from it when wrongly used. It is vain to hope that the number of intemperates in these drugs is smaller than is assumed. We know how fatal is the facility for having recourse to them, and how difficult the resolution to break off a habit once formed. The indications of bodily strain from overwork and anxiety—as told in anæmia, sleeplessness, neuralgia, and in many other ways—which can only be combated by thorough rest and wholesome recreation, are stifled by recourse to such drugs, leading not only to serious deterioration of health, but sometimes, from want of caution, to graver results still. The records of such cases have been painfully frequent of late years. Are we to remain deaf to this reiteration? Shall we not rather continue to repeat the warnings until they are listened to and acted on—acted on not only by individuals, but by the Legislature seeing that its laws are enforced in letter and spirit, so that the facilities by which these things are done may cease to exist?

HOSPITAL PROVISION FOR INFECTIOUS DISEASES IN THE METROPOLIS.

OUR contemporary, the *East London Observer*, has some important observations on the operation of the Poor-law Amendment Act of last session in respect to the power given to the Metropolitan Asylums Board to contract with the sanitary authorities of the metropolis for the reception of patients. It would appear that the Asylums Board has been in communication with the several authorities on the subject, but that the terms proposed by the Board are such as to cause no little dismay to the authorities. So much is this the case that the several sanitary authorities who had previously exercised their power of making hospital provision—Poplar, Whitechapel, and Lewisham are mentioned—may, according to our contemporary, congratulate themselves for having done so. This unexpected aspect of the question must exercise an important influence on its ultimate solution, for it would now seem that, in the interest of the ratepayers and of local economy, the sanitary authorities would have done well to become their own purveyors of hospital accommodation; and that it is probable the "expediency" policy of the Local Government Board in the matter will prove the worst policy.

VOLUNTEER AMBULANCE DEPARTMENT.

THE official inspection of Surgeon Shepherd's class of "Ambulance Volunteers" took place at the Guildhall on Wednesday, Dec. 28th. The inspecting officer was Surgeon-General Wm. Munro, C.B., who arrived punctually at 7.30 P.M., accompanied by Surgeon-Majors Don and Clarke, Captain Pringle, and Lieutenants Mackay and Warren, of the Army Hospital Corps. The Right Hon. the Lord Mayor had signified his wish to be present in state, and a few minutes after the half-hour his arrival was announced, a guard of honour of 100 rank and file of the London Rifle Brigade, under the command of Captain Ward, receiving him with a general salute. The Lord Mayor was accompanied by the Lady Mayoress, Bishop Claughton, Sheriff Bayley, and Under-Sheriffs Crawford and Wragg. The class was then put through stretcher drill by Surgeon Shepherd, of the Victoria Rifles, and soon after the manœuvres commenced the Baroness Burdett Coutts arrived, and occupied a seat on the right of the Lord Mayor. The men performed their drill expeditiously and yet steadily. A certain number lay down on rugs and were ticketed as wounded, the stretcher detachment advanced, placed the stretcher alongside, and quickly applied the necessary dressings, splints, &c., the wounded man being then carefully lifted and carried off the ground. The men showed considerable skill and knowledge in applying Esmarch's triangular bandage, and in making use of temporary splints; in one instance a rifle was applied to a fractured femur. While the dressing was in progress Lady Burdett Coutts and the Lord Mayor inspected the detachments, Surgeon-General Munro explaining the cases to the distinguished visitors, who showed much interest in the work. The class was next formed up in hollow square facing the dais, and the Surgeon-General addressed them; the Lord Mayor also expressed his pleasure at what he had seen, intimating his willingness to subscribe to the funds of the society, "to enable them to carry on even more successfully the noble and patriotic work in which they were engaged." The members of the classes of Surgeon Faris, Army Medical Department, Surgeon Daniells, Surgeon Egan, and Surgeon Norton were then called up one by one by Lieutenant A. Maclure, of the London Scottish, the honorary secretary, and Baroness Burdett Coutts presented the certificate of efficiency to each volunteer entitled by examination to receive one. They numbered nearly two hundred. At the close of the distribution Lady Burdett Coutts addressed a few stirring words to the class, "stating her pleasure at having been invited to be present on the occasion, and her keen interest in the work she had witnessed—one in which she felt every woman in the kingdom as well as herself deeply sympathised. To relieve suffering on the battle-field, and to assuage the pain and misery of those lying helpless or dying, was indeed a noble work." Surgeon-General Munro then dismissed the class, and the proceedings terminated.

DEATHS IN PRISON.

THE death of another prisoner, confined only for a short term, adds to the already long list of casualties that have occurred since the new Prison Act came into force. In the present instance it is alleged that the deceased was a strong healthy man when sent to prison, but the plank bed, starvation diet, and an underground cell caused him to lose weight at the rate of a pound a day, and before his sentence had expired he died from consumption. The case obviously calls for the most searching inquiry; and if the facts alleged are true, then we have additional evidence that the new Prison Act, indiscriminately applied, is most fatal in its results, and that its application ought to be suspended till scientific evidence can determine what modifications are necessary for its successful working. This is not an isolated case, for within a very short period we have had to notice a lamentable series of deaths in her Majesty's prisons under the working of the new Act. The Clerkenwell inquiry into the death of John Nolan, as we pointed out at the time, was conspicuously deficient in scientific and professional acumen. The case at Southampton of conveying a dying man backwards and forwards from one town to another to have his evidence taken before magistrates previous to his actual conviction of crime, and the sad case of Armagh, are still more striking instances of the weak points in our new prison administration. The report of the Prison Commissioners as to the working of the new Act speaks in enthusiastic terms of its success, but here and there we notice, when they have the boldness to publish the medical officer's opinion with regard to the new dietaries, that doubts exist as to their physiological sufficiency. It appears to us that the food-requirements of prisoners drawn from rural and urban districts are widely different. The agricultural labourer, accustomed to a diet composed chiefly of carbo-hydrates and hydrocarbons, insufficiently lodged, and habituated to hard labour, finds the plank bed, bread and water, beans and bacon, and hard labour no great evil; whilst the urban criminal, accustomed to a liberal diet and one ordinarily

richer in nitrogen, unused to great physical exertion, with less stamina, and generally better housed than his rural brother in crime, finds prison life as at present regulated a severe strain on his vital powers, so that should there be any weak spot in his constitution, he breaks down under the pressure. Coroners' inquests tell us of the number of deaths that occur, and of late they have been sadly numerous; but we have no record of those who have been discharged from prison hopelessly injured in health, and who, unable through weakness to make an attempt to return to habits of honesty, fall back again to crime in utter recklessness. We feel no undue leniency towards any criminal class; punishment should be awarded them to the utmost extent of their endurance; but we must protest against a system that barely scathes the strong, but crushes the weak.

THE LAW OF MEDICAL REGISTRATION.

OUR readers will remember that there has been considerable difference of opinion between the Branch Councils and the General Medical Council as to the proper way of making alterations of, or additions to, the details of registration, the General Council maintaining that an alteration could be made in a registration, effected originally, say, in Ireland, by the Registrar of the General Medical Council. The Registrar of the Irish Branch Council maintained, on the other hand, that the alteration must first be made in the Branch Register in which the registration was first effected. Several opinions of counsel have been taken, all of them different. The last seems a sort of compromise, and is as follows:—

Opinion.—We are of opinion that a registered practitioner who desires to have a higher degree or additional qualification obtained by him inserted in the Register, must apply to the Registrar of one of the Branch Councils for that purpose; and that the provisions of Section 25 of the Medical Act as to registration apply to the entering in the Register of such higher degrees or additional qualifications. But we are of opinion that such application, and the consequent entry in the local Register, need not be made to, or by, the Registrar of the particular branch in the local Register of which the original qualification of the applicant was first entered, but may be made to and by any one of the local Registrars. Thus a practitioner whose name was originally entered in the Irish local Register may, in our opinion, apply to the Registrar for England for the purpose of having an additional or substituted qualification inserted in the Register, and such qualification may thereupon be entered in the local Register for England, and be thence copied into the general Register; and conversely a person whose name was originally entered in the English local Register may obtain the insertion of a subsequent qualification by application to the Irish local Registrar.

(Signed) HARDINGE GIFFARD.
F. VAUGHAN HAWKINS.

Temple, December 11th, 1879.

DEMONSTRATIONS AT THE PARKES MUSEUM.

FOOD was the subject of the demonstration on Saturday last (31st Jan.), when, in spite of the thick fog which enveloped the metropolis, there was a fair attendance of representatives from the working men's clubs, for whose benefit the present series of demonstrations has been arranged. Dr. G. V. Poore, the lecturer of the day, was introduced by Professor W. H. Corfield.

Dr. Poore began by comparing the human body to a machine, and showed that as by a proper consumption of fuel an engine could be made to give off heat and do work, so the animal body, by a proper consumption of combustible food, was enabled to maintain its proper temperature in all climates, to perform its internal and external work, and likewise (and in this it showed its superiority to the machine with which it had been compared) to maintain its tissues in a state of health and due development.

The composition of the body was next alluded to, and it was claimed for food—(1) that it must be combustible, and (2) that it must contain materials which are capable of building up the body. The classification of food-elements into water, nitrogenous elements, fats, starches, sugars, and salts was then reviewed, and the necessity for the presence of each element was insisted upon. Milk, the only single article of diet upon which the human body can be properly nourished, was then shown to contain a due admixture of food-elements.

The predominating features of various articles of diet were then touched upon, and the mode of devising and calculating dietaries was shortly explained.

In a natural state it had been shown that man might be left to his natural appetite in the selection of his diet, and many popular foods—such, for example, as bread and cheese and pork and pease-pudding—were thoroughly in accordance with scientific teaching. Some persons were so situated that an obedience to the appetite was impossible, as, for example, soldiers, prisoners, and helpless children. Scientific dietaries had improved the health of our soldiers, and had converted our prisons from pest-houses into veritable abodes of health. There was still too little science in the feeding of young children, and the ignorance of parents in this respect was truly lamentable. Dr. Poore's experience as a physician had taught him that the great majority of children's ailments were traceable to the inability of the mother to make a proper selection of food for her offspring.

THE ZULU WAR: SECCOCOENI EXPEDITION.

OUR correspondent in the Transvaal sends us some interesting notes of the medical transactions connected with the storming of Seccocoeni's stronghold on the 28th of November. We have already described the arrangements for the wounded planned by the senior medical officer of the force, consisting of field hospitals, dressing stations outside the line of fire, ambulances, and the bearer company of Surgeon-Major Hector. The stronghold possessed such a natural defensive position, and the numerous rocky caves and koppies were known to hold numbers of an enemy recklessly brave, that hard fighting, with a heavy list of killed and wounded, was anticipated. At early dawn on the 28th the ambulances, water-carts, country waggons with straw to supplement the ambulances in the event of many wounded, were moved into the positions selected. The surgery waggon was unluckily upset in crossing a stream, but its contents were removed and brought on. Surgeon-Major Johnston, with Surgeon Fraser to assist, was told off to the dressing station, Surgeon-Major Kerr, with Surgeon Martin, at the field hospital, where also Lieutenant of Orderlies Horn, was stationed with a plentiful supply of medical comforts, &c. When the action commenced, the bearer company followed the skirmishers, accompanying them up the fighting koppie, doing their duty quietly, steadily, and efficiently, often under heavy fire; and so close up with the fighting line were Dr. Hector and his men that barely a moment elapsed before a wounded man was attended to and carried off the ground. Sir Garnet Wolseley expressed himself as greatly pleased with the working of the bearer company on this occasion, the first, it may be observed, where a regularly-trained and disciplined company has been present in action with our troops. Colonel Baker Russell, who commanded the attack, was also warm in praise of the prompt and speedy manner in which the wounded were removed from the field without a single soldier from the fighting ranks being called on to leave his post to carry them to the rear.

Surgeon-Major Hector had barely a month in which to train his men, who consisted for the most part of Kaffirs with a sprinkling of Europeans, but by constant instruction and drill he had them well in hand, their steadiness under fire

and the valuable aid they rendered on the battle field rewarding him for his exertions. Surgeon Lloyd gave willing assistance both in the preliminary training and during the engagement. Forty-nine wounded Europeans, many of them serious cases, were conveyed to the field hospital, while more than 200 Swazies and irregulars were received there, having their wounds dressed and getting every care and attention. The wounded left for Middleburgh a day or two after the fight, where a Base Hospital fully equipped, and the lady nurses from Netley, were ready to receive them. By the latest reports they were all doing well.

DIPHTHERIA IN RUSSIA.

THE ravages of diphtheria in Russia appear to be increasing rather than diminishing. The disease would seem, indeed, in certain districts, to be obtaining pestilential proportions. The medical faculty in Kharkov insist upon the necessity of severing both the sick and the healthy from infected homes, and urge the preparation of both houses of refuge and hospitals for those persons who cannot be properly isolated and cared for in their own dwellings. They advise also that before convalescents leave hospital their old clothing should be burned, and that they should be furnished with new. Further, they suggest that religious ceremonies, such as communion, extreme unction, burial, &c., should not be carried out without precautionary measures being taken against the dissemination of contagion. Professor Jacobi, discoursing on the subject before the Medical Society, laid down the following propositions: (1) diphtheria is particularly fatal to infants, and spreads not only by contact of the healthy with the sick, but also by means of the clothing of the sick; (2) diphtheria selects by preference marshy, damp localities, and ill-ventilated and overcrowded houses. He advises that when the disease shows itself in a family all the healthy children should be at once removed to a dry, well-aired house, kept apart for five days, and not allowed to mix with others until after their clothing had been well washed. When the disease shows itself in a village the medical man and priest of the locality should, among other things, warn the inhabitants of the danger run, and attach to the door of the infected house a notice written or printed on yellow paper, as a caution. The epidemic is now penetrating into Poland, and attacking there especially scholars. Numerous victims have fallen to it in the gymnasium of Chelm. The first sanitary detachment formed by the Red Cross Society for the relief of the diphtheria-stricken districts in Poltava has left St. Petersburg. It consists of thirty-one sisters and five medical men, under the charge of M. Feodoseïew. Other detachments will follow. The branch of the Red Cross at Kharkov is organising three sanitary detachments for work in the zemstvo.

CONTRACTS TO ATTEND.

WE have often reported cases in which medical men have recovered obstetric fees from patients who had engaged them to attend, and yet did not send for them at the time of delivery. A medical man is hindered by an obstetric engagement, even if not sent for. We have now to report an instance in which the husband of a club patient has sued a medical man for recovery of £1 14*s.*, because the surgeon failed to attend his wife, though having engaged to do so as a club patient, for 7*s.* 6*d.* The plaintiff, according to the *Grantham Journal*, had contributed to a club in view of his wife's confinement, expecting to have the defendant's services on the occasion. The surgeon had an engagement, not a professional one, which prevented him going. He offered to send a midwife. But the plaintiff engaged another medical man, and he claimed the recovery of 30*s.* he had paid into the club. Judgment was given for the plaintiff. We must admit that a contract cuts two ways and binds both sides, always supposing that the medical man is physically and professionally able to fulfil his contract. Of course, he cannot be in two places at once, and, supposing him to be engaged with another case equally urgent, he could not, we presume, be successfully proceeded against for not keeping his engagement. Accepting, however, the adverse application of the law of contract, it seems to us that here it has been somewhat harshly carried out, and that the medical man is punished in having to pay more than the sum for which he agreed to attend the case. The moral of the matter is that medical men must guard themselves in making engagements of this character.

THE EXAMINATION FOR THE PUBLIC SERVICES.

A LARGE number of candidates for commissions in the Army Medical Department and the Indian Medical Service have sent in applications to compete at the examination on Monday next, while the number of aspirants for the Royal Navy is, we believe, barely half a dozen. During the present crisis in naval medical matters we must express our regret that any gentlemen have come forward at all.

TYPHUS IN LONDON.

DR. WHITMORE in his last monthly report directs attention to the occurrence of a case of typhus in his district. The patient had only slept there one night and he was removed to the London Fever Hospital. It was found impracticable to trace out the previous history of the case, but Dr. Whitmore notes it as not insignificant when considered in connexion with the occurrence of cases in other parts of the metropolis.

YEOVIL HOSPITAL.

AT the annual general meeting of the subscribers of the Yeovil Hospital and Dispensary, the honorary medical officers, Dr. Aldridge and Mr. Garland, and the surgeon-dentist, Mr. Hunt, were presented with valuable testimonials in silver-plate in recognition of their services to the institution. Gratuitous medical work is so rarely recognised and valued by the subscribers to our hospitals and dispensaries, that we have especial pleasure in noticing this exception. In returning thanks the medical officers made the important suggestion that the out-patient department should be rendered self-supporting. There is certainly no reason why the services of the medical staff of these hospitals in country towns, where the means of patients can be so easily investigated, should be gratuitously given to all comers, as is the usual custom at present.

THE LATE SURGEON-MAJOR PORTER.

THE medical officers at Netley have decided to erect a memorial brass in the chapel of the Royal Victoria Hospital to the memory of their late comrade, Surgeon-Major Joseph Henry Porter, who died in the Sherpur Camp, Cabul, on 9th January, while acting as principal medical officer of the Cabul force. The subscription is limited to one guinea, and a committee, consisting of Surgeon-General Thomas Longmore, C.B., Surgeon-Major Boileau, and Surgeon-Major Notter, have been formed to collect subscriptions and carry out the proposal.

THE RUSSIAN TRANS-CASPIAN EXPEDITION.

A DETACHMENT of nine sisters of charity recently left Odessa to render service to the sick and wounded of the Russian Trans-Caspian Expedition. The sisters travelled to Temir-Khan-Schouron by way of Kharkov and Vladikavkaz. Three of the sisters were attached to the hospital at Temir-Khan, which contains 210 patients, and the six

others were sent on to Petrovsk, to give assistance in an ambulance which has been established there. This ambulance, which is formed in a large two-storied building, is capable of receiving 600 patients, but at present contains only 200. The arrival of the sisters is stated to have exercised a very happy effect upon the sufferers in the different hospitals.

A DISCUSSION took place at the College of Physicians in Ireland last week, at the annual meeting of the Dublin Branch of the British Medical Association, consequent on a paper read by Dr. J. WM oore, on Compulsory Notification of Infectious Diseases. Dr. Moore believes that, although the difficulties are great in obtaining compulsory notification and registration of infectious diseases, yet they are not insurmountable. Briefly, he recommended as desirable the plan suggested of compelling the owner or occupier of a house where an inmate is suffering from an infectious malady, to forward a certificate, prepared by the medical attendant, to the sanitary authorities, and, for registration purposes, a certificate from the practitioner to the General Registration Office.

AT a meeting of the Council of the Poor-law Medical Officers' Association, held on Feb. 3rd, at their rooms, 3, Bolt-court, Fleet-street, attention was directed to the hardship of the case of Mr. J. J. Terry, of Wiltersham, Kent, who, after upwards of forty years' service as Poor-law medical officer, was refused superannuation allowance when incapacitated for further duty. It was resolved that a communication be addressed to the President of the Local Government Board on this subject, he having promised to a deputation of Poor-law medical officers on June 12th, 1876, his willingness to investigate any case of this nature which might be brought before him.

A DEATH during the inhalation of chloroform at the West Norfork and Lynn Hospital, took place on the 29th ult. We shall publish a full account next week.

THE INFECTIVE DISEASES KNOWN AS PYÆMIA, SEPTICÆMIA, AND PURULENT INFECTION.[1]

I.

THE elaborate and exhaustive report which was presented to the Pathological Society at the close of its last session occupies a prominent place in its recently issued volume of Transactions; and as it was also drawn up under the auspices of the Local Government Board, it will appear in the forthcoming Report of the Medical Officer of the Board. It is impossible to do full justice to this report without presenting a tolerably complete analysis of its contents, and we propose to deal seriatim with each portion of it, in order that those who may not have access to the document itself may be in possession of the leading features of this important inquiry. For although the Committee do not, wisely, formulate any conclusions, it is certain that hitherto no such complete investigation has been made into a subject admittedly obscure, and the report teems with suggestive considerations, both clinical and pathological, besides containing many new facts of great importance to a clear understanding of the subject. The plan pursued by the Committee was laid down upon the following lines. In the first place, to collect statistical information from nearly all the large London hospitals from the years 1869 to 1878, with a view to ascertain definite facts of the etiology of these diseases. Secondly, by an analysis of 156 detailed reports of cases, to attempt a classification of them according to their clinical and pathological features, and to ascertain how far these correspond with diseases of like kind produced experimentally in animals. Lastly, to ascertain by microscopical examination of the blood and of the viscera, and by analysis of the urine, what are the constant pathological characters of these affections. We propose to abstract the results obtained in each of these branches of inquiry, and, dealing with the first head now, to leave the others for subsequent notice.

1. *Sex and age.*—Out of 321 cases of pyæmia and septicæmia under treatment during the ten years above-mentioned in the London, Middlesex, and St. George's Hospitals, 252 were males and 69 females. This large preponderance of the male sex is somewhat counterbalanced by the fact that the table does not include cases arising in the puerperal state nor those following ovariotomy. The greatest number of cases occurred between the ages of thirty and forty, but no period of life can be said to be exempt.

2. *Influence of season and meteorological conditions.*—On this interesting point some curious facts are detailed, although necessarily the question is one of much difficulty. It was found that the average annual mortality from these diseases in eight large London hospitals for the decennium was 92·1, but that average was greatly exceeded in two years—1874 and 1875,—reaching 125 in the former. The lowest death-rate was in 1869—viz., 64, but as that year does not comprise returns from one of the hospitals, the year 1878 was probably the lowest. An endeavour is then made to ascertain whether the years 1874 and 1875 were characterised by any special meteorological conditions sufficiently marked to differentiate them from other years of the period with which the heightened mortality might be associated. It is pointed out that in these two years there was a comparatively high mortality for all diseases throughout the kingdom, and that in 1874 cases of erysipelas treated in hospitals were unusually numerous. Inquiry into the climatic variations points to the fact that both in 1874 and 1875 the atmospheric changes were more severe than in any other of the ten years, but that, whereas 1874 was notable for a rainfall much below the average, in 1875 the rainfall was excessive. Passing from the annual rate of mortality to the monthly average, we find that in the period this latter in three hospitals (St. George's, London, and University College) was 28·5, the death-rate in February being 51, in March 40, and in May 34. To what reason can this heightened mortality in these three months be attributed? It is suggested that it may be connected with sanitary and meteorological conditions, such as the distance of the period from the annual hospital cleaning, or the necessity of having the ward windows closed for longer periods together during the prolonged wet and cold weather of February, and during the east winds prevailing many days together in March and May.

3. *Relationship of pyæmia and septicæmia to erysipelas.*—On this point the Committee have failed to establish any definite relationship. The data gathered from five hospitals show that although in 1874 there was a marked excess in both these classes of disease, yet in 1871, which follows next in high mortality from pyæmia, the cases of eryaipelas were comparatively few.

4. *Duration of the disease, and frequency of occurrence after various surgical lesions.*—An analysis of 142 cases, in which the date of invasion was stated, gives an average stay in hospital from the time of admission to the onset of pyæmic symptoms of 20·2 days, and a period of 9·2 days intervening (in 153 cases) between the date of invasion and death. A table is given showing the relative frequency of occurrence after various surgical lesions. The table includes 768 cases, culled from six hospitals. Of this number 218 followed operations, 120 injuries, 208 arose in the course of surgical diseases, and the remaining 96 appeared due to a variety of conditions not admitting of analysis, and to which no distinct cause could be assigned. Of the operations, 145 followed amputation of limbs, after amputation of the breast, 8, removal of tumours 18, herniotomy 4, osteotomy 3, lithotomy 4, ligature of arteries and piles 12, trephining and fracture of the skull 11. Under injuries there were 50 cases of compound fractures and dislocation, 18 of simple fracture, 12 of lacerated wounds, and 30 of contused wounds; 66 cases are classed as "urethral." Diseases of joints (including excisions) yielded 104 cases, diseases of bone 72, abscess 50, ulcer 16, and carbuncle 12.

These comprise the main etiological data furnished by the Committee, and we have deemed it well to follow closely in

[1] Report of the Committee appointed by the Pathological Society of London to investigate the nature and causes of those infective diseases known as Pyæmia, Septicæmia, and Purulent Infection.

their lines. The appendix to this portion of the report comprises numerous and valuable statistical tables, the compilation of which must have been a matter of no slight difficulty; especially in view of the fact stated in the closing paragraph of this portion of the report, which runs as follows:—"Before passing from this part of the subject we would observe that, considerable as the number of cases collected in these statistics may be, still, spread as they are over a number of years, they are insufficient to found definite conclusions upon, but may prove useful as suggesting points for future inquiry. They would have been, however, more conclusive than they are had the whole material of the London hospitals been available; but unfortunately, owing to the absence of any uniform system of keeping the registers throughout the metropolitan hospitals, information given in some reports is not mentioned in others. It would be of immense value, especially in determining the etiology of diseases in points relating to their predisposing causes, if a uniform system of registration were adopted in all metropolitan hospitals." With which opinion we thoroughly concur.

SMALL-POX AT BATH.

THE following is a copy of a report adopted at a recent meeting of the Bath Board of Guardians, Major Allen presiding:—

"Your committee informed the City Sanitary Authority of the injury they believe results to individuals and the community from the present mode of dealing with small-pox cases, and they were asked to consider whether they could arrange to care for all persons needing hospital accommodation other than those actually receiving medical or other poor-law aid. Your committee pointed out that the demand of 15s. per week and the cost of conveyance to the Statutory Hospital of persons who, for the public safety, cannot be nursed at their homes, forced some people for the first time to obtain relief from the guardians, and that consequently they (and in some cases their families) come on the pauper roll, and voters were disfranchised; that such unfortunate introduction to pauper relief would tend to break down the wholesome dread of parish relief. The cost of these patients would have to be paid by the ratepayers, whether at the Statutory Hospital or the workhouse, but the latter would add to the affliction of the disease, the injuries alluded to. If in cases of infectious epidemics a number of people are forced on the care of the guardians they would be compelled to build an additional hospital, and thus two institutions would have to be maintained at the public cost instead of one, the arrangements at the workhouse being sufficient under ordinary circumstances for all cases arising in actual paupers. It is also safer to remove the majority of cases to the isolated hospital at Claverton Down instead of the workhouse. The power for the removal of cases dangerous to the public, possessed by the Sanitary Committee and not by the guardians, was also advanced. A friendly discussion followed, which evidenced that both bodies had endeavoured to meet the emergency in proportion to the accommodation at their command, that though the Statutory Hospital was erected for persons who could pay, the medical officer had used a discretionary power and had admitted four urgent cases, unable to pay for their admission. The City Sanitary Committee is not prepared to increase the hospital to permit of the admission of the people who are under existing arrangements forced into the pauper ranks. It is clear that so long as a city the size of Bath is content to provide only twenty-four beds, including the wooden building, five of which beds are kept vacant for fever cases, the injurious difficulty the guardians wish to remove will continue until the epidemic wears out. The committee have reason to hope that the epidemic is on the wane. Though Bath has been exceptionally free in the past from epidemics, the present condition should convince the inhabitants that they have not the provision made for properly dealing with such possible visitations."

The following is an extract from the medical officer of health's annual report for 1879:—

"I give a brief account of the origin and progress of this outbreak of small-pox. On July 23rd the first case of small-pox was reported—a private patient in Corn-street—by the medical attendant. The patient, a girl aged nineteen, had been on a visit to a sister in London, who took small-pox and infected this patient, who on her return home developed small-pox. In this instance there were sufficient means of isolation, and compulsory removal was out of the question. However, the use of the Statutory Hospital was offered, but declined. The next case was reported on Sept. 18th in a girl in Avon-street, who was employed as a rag-sorter. It is a curious coincidence that the first case was in the daughter of a rag-collector; but minute investigation could detect no communication between the houses. This case, being attended by the parochial medical officer, was sent to the Union Hospital. During the fortnight ending Oct. 8th two cases were reported—one at the Blind School, Walcot, infection apparently being conveyed in clothing from London; the other was removed to the Union Hospital. On Nov. 18th one case was reported, and removed to the Statutory Hospital, which, in consideration of being intended for other infectious diseases, I wished to keep intact as long as possible. However, the emergency arose, and, the hospital, being empty, was used, and has since been utilised, to the exclusion of any use of other infectious disease which might arise. Measles being at this time frequent and fatal, and some two or three cases of scarlet fever having been reported, I advised the Sanitary Committee to erect an auxiliary temporary hospital to provide for any cases of such disease as might arise. This was done within as short a time as possible, and here there was afforded accommodation for twenty-one non-pauper patients, which, under the circumstances, might have been considered sufficient to meet the exigencies of the case. This temporary hospital is constructed in such a manner that it can be added to within a brief period and to any required amount. So far I may say to the present moment the accommodation has been sufficient to meet not only all the demands on its space for non-paupers, but also I have been enabled to admit cases which were practically paupers, a certain discretion being kindly given to me by the Sanitary Committee to abnegate, under certain circumstances, the strict rules under which patients are admitted to the Statutory Hospital. In the suburban village of Weston an outbreak of small-pox occurred in houses occupied by washerwomen. This is outside the borough. These cases were not removed, and doubtless the infection was spread through the agency of clothes washed in these houses. I can give two instances in which infection was conveyed to persons living in Bath by this means. Four cases occurred at the United Hospital, but were speedily removed, and there has been no recurrence of the disease in that institution. To sum up, between the occurrence of the first case of small-pox on July 23rd and Dec. 31st, being a period of five months and seven days, a total number of eighty cases were reported. The deaths amounted to eighteen, two of which had not, for special reasons, been removed. Of these deaths, twelve were unvaccinated, and four had marks which were equivalent to no vaccination; of the remaining two there was no information. The outbreak occurred and has, with the exception of some half-dozen sporadic cases, been confined within certain limits, and, I am glad to say, so far has not shown any tendency to spread beyond those limits. Nor have those sporadic cases proved the foci of infection which sanitary pessimists would expect; this I attribute to immediate isolation and disinfection. The same results might have been obtained in those streets and courts in which the disease has prevailed had the conditions been the same, but the comparatively total regardlessness of all sanitary precautions, both generally and socially, renders almost futile the effects of isolation and disinfection which have been and are being carried out in the districts affected by the disease, and inasmuch as the inhabitants of these places are of the poorest class, probably in want of proper food and sufficient fuel at this inclement season. So do we find that small-pox has, following its ordinary laws, entirely confined its attack to this class. Not one single case of small-pox among the upper classes has been reported, not one single case of the disease has been reported in the streets, and squares, and crescents, which are the residence of the upper class, and to which visitors resort. Yes, one case, a servant, who probably contracted the disease through clothes washed at Weston. I can go further, and state that no cases of small-pox have occurred in the smaller and more insignificant streets, chiefly occupied by an humbler class whose principal subsistence depends upon letting lodgings. When I say no cases, I mean nothing to constitute an epidemic; and in the face of these facts an absurd panic has been raised, sufficient and I fear successful enough to injure the prospects of the city, by driving away visitors who had come, and preventing others from coming.

Let anyone take the map of the city and draw a perpendicular line through the centre; intersect this line at right angles, and out of the four segments thus formed the outbreak has been almost totally confined to one segment of the four. Sporadic cases have occurred in the other three or some of them, but this does not constitute a small-pox epidemic in Bath, although it is an epidemic respecting the unfortunate district affected. Of the eighty cases of small-pox reported seventy-four were removed—fifty-three to the Union and twenty-one to the Statutory Hospital. In every instance the removal of the case has been immediately followed by disinfection of rooms and all articles of bed-clothing and body-clothing."

DR. FARR.

AT a meeting of the Sheffield Medico-Chirurgical Society, held on Jan. 29th, Mr. Arthur Jackson, President, in the chair, the following resolution was unanimously adopted:—

"That the members of the Sheffield Medico-Chirurgical Society desire to express their high sense of the great services which Dr. Wm. Farr has rendered to his country in promoting sanitary progress, and to record their deep regret that his paramount claims to the Registrar-Generalship have been overlooked by the present Government, and to hope that those services will shortly be recompensed in a suitable manner by that Government."

Copies were directed to be sent to Lord Beaconsfield and Mr. Sclater-Booth.

Correspondence.

"Audi alteram partem."

VACCINE LYMPH.

To the Editor of THE LANCET.

SIR,—Dr. Cameron is anxious to avoid the charge of dogmatism; but so long as he arrogantly asserts opinions opposed to facts he cannot escape the imputation. He asserted in *The Times* of November 24th, 1879, that the lymph obtained by the inoculation of the cow with small-pox virus was the source of the dissemination of small-pox—was, in fact, inoculated small-pox. Notwithstanding (as you justly observe) "the large amount of the lymph thus obtained and used in this country, he has not produced one particle of evidence to show that in any single instance small-pox was even ever suspected to have been produced by infection from a case of so-called variola vaccine. The dilemma he now sees is insuperable, and he proceeds to urge, in effect, that this modified small-pox has lost its infective qualities, and that, if not dangerous as inoculated small-pox, it has become useless as a protection against the natural disease! He discards his first line of argument as to the mischievousness of this variola vaccine lymph in disseminating contagion, and substitutes another sort of argument which is equally against all experience." Like Goldsmith's schoolmaster, "even though vanquished, he can argue still." Had Dr. Cameron, before making such rash and reckless assertions, made inquiries at home, he would not have fallen into the dilemma in which he now finds himself. He would have discovered that my experiments in inoculating the cow with human variolous virus were not made for the purpose of obtaining a new lymph, but in the endeavour to solve a doubt long entertained of the affinity of vaccinia and variola, that after fruitless attempts to infect the cows by the method of Sonderland and Neumann, and amidst several failures to inoculate such animals with small-pox, I at length succeeded in obtaining vesicles bearing all the characteristics of those which I had repeatedly seen on the cow casually developed; that these experiments were performed in the presence of members of the veterinary and medical professions, and watched during their progress and in all their phases and effects on the human subject, corresponding with those resulting from active primary vaccine, to which none of them were strangers, and were unattended at any time by abnormal or varioloid eruptions. He would also have known that the lymph was for a long time under observation at Cheltenham, where it was extensively used; that for many months it was in use at the Small-pox and Vaccination Hospital under the observation of Dr. Gregory and Mr. Marson, and at the Cow-pox Institution in Dublin, and by numerous private practitioners in all parts of the kingdom. I also forwarded supplies of the lymph to the East and West Indies, to Africa, and many other places at home and abroad, all agreeing that it proved to be an active genuine vaccine lymph, unattended by any abnormal eruptions or any approach to variola.

The details of all the proceedings on the animals and on man, with numerous illustrations, I was permitted to place in the eighth and tenth volumes of the Provincial Medical and Surgical Association's Transactions, and they, with descriptions and illustrations of other allied subjects, have received critical and favourable notices by highly qualified critics.

But, after all, I am happy to add that I am but one among the many successful operators in the above experiments. The success of my predecessors was unknown to me till after the publication of my own. The most distinguished of my successors is Mr. John Badcock, of Brighton, who, unacquainted with my experiments, commenced with the desire to obtain a new stock of vaccine lymph, I think in the year 1840. He, having the advantage of a succession of milch cows in his dairy, has obtained repeated supplies of new lymph, during a period of many years. I have had the pleasure at various times of using his lymph, and always found it possessed of the qualities of my own. It was for several years in use by the late Mr. Marson at the Small-pox and Vaccination Hospital, and has been repeatedly transmitted to all parts of the world with the best effects. A stock generated twenty years ago is still in use at Brighton by the public vaccinators and many private practitioners, with undiminished power, and eliciting the recognition and unqualified appreciation of those most competent to judge.

It is to be hoped now that Dr. Cameron will see what he has lost by inattention to the advice of Cicero to his inquiring friends: "Meos amicos in quibus est studium, jubeo ut a fontibus potius quam rivulos consectentur."

I remain, Sir, yours truly,

Aylesbury, Jan. 28th, 1880. ROBERT CEELY.

ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—Having read in THE LANCET for Jan. 17th an account of the discussion on acute rheumatism at the Clinical Society's meeting, and *à propos* of the very interesting remarks of Dr. Goodhart, I send you the particulars of a fatal case which has just occurred in my practice, and which was treated by means of the salicylate of soda.

On Dec. 31st I was called to see A. B——, aged twenty-six, of an excitable and irritable temperament, with a history of asthma, but otherwise healthy. He complained to me of stiffness of the joints, pain about the shoulders and back, shivering, vomiting, &c., and he attributed these symptoms to exposure to wet and cold. I ordered him to bed, and next day diagnosed rheumatic fever. I need not take up space with the symptoms of the case, as it appeared a typical one, and uncomplicated. Sleeplessness and restlessness were prominent symptoms. I attended him for nine days. During the first four days he was placed on the alkaline treatment, and the joints, which were all affected, were fomented with anodynes, carefully blistered, and well wrapped in cotton-wadding. The skin and kidneys acted freely, and the bowels once or twice daily. As he continued to suffer great pain, so much so that he expressed a wish to die, and to have, despite the free use of opiates and chloral, very restless, sleepless nights, with some delirium, I determined to try the salicylic acid treatment, which I had been successful with, particularly, in a case of acute rheumatism complicating convalescence from enteric fever. I placed him on fifteen grains of the salicylate of soda, in glycerine and water, every three hours. Improvement commenced very quickly, and in two days' time he delighted his friends by exhibiting how easily he could move his legs in bed, and how nimble his fingers were. He complained of a little numbness in his hands, but was entirely free from

pain. The temperature had fallen from 102° and 103° to a little below 100°; pulse 120, of fair strength; sweating diminished; sudamina abundant; slight deafness and singing in the ears; thirst still insatiable; heart sounds unaffected. Next day, the third of the salicylate treatment, I diminished the remedy by one half, and, on the following morning, as there had been some alarming violent delirium, of short duration, during the night, I discontinued its use altogether and recommended the alkalies. Beyond the report of delirium I did not consider him any worse at the time of my visit, which was about 10 A.M. During the day, however, he became worse, and at 10 P.M. there was much pain again in the knees, ankles, and shoulders; pulse 124; temperature higher than ever, 104°. The heart-sounds had altered since the morning, and there was now heard a loud systolic murmur. He had been on the alkaline mixture all day, and, thinking that the salicylate would again give ease, or at least moderate the heart's action, which was rather tumultuous, I ordered it to be recommenced in fifteen-grain doses every three hours as before. At 4 A.M. a messenger came to my house stating that the patient seemed to be dying. On my arrival I found him moribund, unconscious, breathing stertorously; temperature 109°; pupils equal, contracted. He lived only half an hour after I was called. He had been very violent for an hour and a half, from 2 A.M. to 3.30 A.M., requiring two or three men to hold him. Had had two doses of the salicylate. No post-mortem examination.

Since the termination of the case I have repeatedly asked myself the following questions:—(1) Was my patient's sudden death the result of the hyperpyrexia, or embolism, or the use of the salicylate? (2) Ought I to have continued the salicylate instead of substituting alkalies the last day, or had I already gone too far with it and decided the case with the last two doses? Had I continued it without intermission I might have connected it with patient's death, but it is a drug the effects of which pass off quickly, and the patient had only thirty grains during the eighteen hours preceding death. Moreover, a like result is, so far as I know, comparatively rare during its use.

I remain, Sir, yours obediently,
Oldham, January 23rd, 1880. R. BRYDEN HILL, M.D.

ENCYSTED STONE.

To the Editor of THE LANCET.

SIR,—Will you kindly give me a place in your publication for a few observations on a case of "Encysted Stone," reported in THE LANCET of July 26th, 1879, under the care of Dr. Lediard? This gentleman will allow me to compliment him on the result of a rare case, and one requiring no small share of management and surgical address, under unexpected and difficult circumstances. I am particularly interested in the case, having met with five such cases, and having myself operated on two of them. I am anxious to draw the attention of the profession to "encysted stone," and I believe I am the first to elucidate its nature; and if I am correct in my view, it will establish a rule of practice in such cases; and, of course, the question is an important one in this light. My views are given in the *Medical Times and Gazette* of July 12th, 1872.

Those cases of so-called "encysted stone" are found in young subjects; they are of long-standing; there is a constant dribbling away of urine; the bladder is in an empty state, contracted on the stone, and forcing it into the neck of the bladder, where it gets impacted, and by the constant expulsive force exerted on it, the stone eventually *ulcerates* through the coats of the bladder, and so forms a *sort* of cyst for itself; the opening by which it escaped from the bladder gradually contracts, and the foreign body is shut out of the cavity of the bladder, and in this way Nature is capable of curing the disease. She very nearly effected this in my two cases. She had only accomplished a third of this in Dr. Lediard's case.

And now for the rule of practice—the most important point in such cases. They can be "diagnosed," at least the five cases I have seen were, by examination with the finger from the rectum. I am convinced that the median is the only operation suitable in such cases. I perform myself the median in all cases, and in fifty or sixty cases I have had only three deaths in all. But in those encysted cases the median should alone be performed. The cyst and its contents are in the median line; you cut on it and extract the part you find therein. If the neck be narrow, as in my cases, you of course break it (the external stone) off, and you then follow the part in the bladder, according to circumstances, either dilating with a probe-pointed or button-pointed bistoury, or cutting on the groove in the staff, and so finishing the operation, as in ordinary cases, having, however, the advantage of an opening ready made into the bladder. In Dr. Lediard's case, there would have been no necessity for his *cutting* at all into the bladder. Any surgeon will see what difficulty I must have encountered had I chosen the lateral operation in my cases. Dr. Lediard encountered and overcame some of them successfully. The cyst in these cases is not lined by a smooth membrane, nor is the surface of the stone contained in it smooth; on the contrary, the surface is most irregular, projections and anfractuosities, into which granulations like worms are inserted, attaching the stone to the cyst. In my cases it is evident that I could not have scraped away the particles remaining attached, as Dr. Lediard was enabled to do with no small difficulty. If the opening had been direct, as in the median, this would not have been necessary, as all the débris left would have come away with the subsequent discharges. Had I performed the lateral operation, after having reached the bladder and brought away the stone found therein (in No. 2 case), I should have been obliged to cut "transversely" on the cyst (supposing I had presence of mind enough to realise the exact position of affairs), and thus there must have been made *two openings* into the bladder.

It is evident, to me at least, that the median operation is the only one suitable in these so-called "encysted stones." Fortunately for those who, as a general rule, prefer the lateral, these cases can be diagnosed from the rectum by the finger.

I am, Sir, yours, &c.,
JAMES MCCRARTH, M.D., F.R.C.S.,
Smyrna, Nov. 19th, 1879. Surgeon British Seamen's Hospital.

THE EFFECT OF SALICYLATES ON THE HEART.

To the Editor of THE LANCET.

SIR,—Will you permit me to correct a serious misrepresentation which occurs in THE LANCET of January 24th. In a short article on the recent discussion at the Clinical Society on Dr. Goodhart's paper on "Sudden Death in Acute Rheumatism," you attribute to me the statement that I have *invariably* found a diminution or disappearance of the first sound of the heart when patients have been treated with the salicylates. It was far from my intention to make such an absurdly general statement as that. I regret very much if I failed to make myself understood, but I am generally reported as having "found that the first sound of the heart is *often* absent during convalescence," &c. This by no means conveys the unrestricted assertion to which you call attention. Of course, in a large proportion of the cases of acute rheumatism which come under observation, the first sound is obscured or replaced by a bruit; only those in which the heart is unaffected remain for observation. In a considerable proportion of these I have noticed the first sound very feeble or absent during convalescence, and I have felt inclined to attribute this to the salicylate; but I am quite unprepared to deny that the same condition occurs during the convalescence of rheumatism that has not been so treated. Moreover, should the drug in question enfeeble the action of the heart, as I am inclined to think, I should not regard it by any means as an unmixed evil; for the pulse in acute rheumatism, especially with pericarditis, indicates a markedly excited action, and a drug that will enfeeble this action may give the heart that physiological rest which is so highly desirable in this condition.

I am, Sir, yours, &c.,
Feb. 1880. F. A. MAHOMED.

PREGNANCY AFTER OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—Many cases like that related last week by Dr. Harding, of Whittlesea, would settle a question that has exercised physiologists—whether the sex of a child is determined by the ovary from which it is generated. But then it is necessary to put on record the fact as to *which* ovary

was left after "ovariotomy." Will Dr. Harding state this for the case of Mrs. R——, who produced a female child after extirpation of one ovary?

I am, Sir, ours faithfully,

Feb. 2nd, 1880. BETA.

EDINBURGH.

(From our own Correspondent.)

DR. KEITH had a second case of ovariotomy on the 24th January. In this case a large dermoid cyst was removed, a long narrow pedicle ligatured and returned to the abdomen. There were many adhesions to the omentum and intestine, which were carefully separated, and bleeding points secured with catgut ligatures. These adhesions were due to the position the patient had chiefly occupied—viz., lying with the face downwards. The usual antiseptic precautions were followed. The first case has made a good recovery.

At the meeting of the University court on Monday (26th January) the medical examiners were all reappointed with the exception of Dr. Dyce Duckworth, whose term of office as Examiner in Practice of Medicine has expired; Dr. A. B. Duffin, of King's College, has been elected as his successor.

NAVAL NOTES FROM MALTA.

(From a Correspondent.)

STATEMENTS all more or less incorrect regarding the outbreak of small-pox in H.M.S. *Rupert* have recently been going the round of the papers. The facts are these. When at sea on the 5th of last December, while on passage from Alexandria, and the day before reaching Malta, Sub-Lieutenant Moore "went sick." Two days after arrival decided symptoms of small-pox appeared, and the sufferer was placed in the Royal Naval Quarantine Hospital. Two days thereafter a stoker of the same ship was also sent there similarly affected. Mr. Moore's case ended fatally, the stoker is convalescent, and there has been no further spread of the disease. The ship was never put in quarantine, and otherwise the health of the crew has remained excellent. It is unknown how the contagion was caught. For ten months previously the stoker had had no communication whatever with the shore. It is also certain that the officer had not been out of the ship for many months. The senior medical officer has issued a supply of fresh vaccine lymph-tubes to the various ships for the purpose of revaccination, and other necessary precautions having been duly observed, the mischief is probably at an end.

Great regret is felt at the sudden death of Fleet Surgeon Roe, R.N., of H.M.'s Dockyard, which took place in the Naval Hospital on the evening of the 4th inst. The sympathy with his wife and family is universal.

The recent batch of promotions to the rank of Staff Surgeon did not bring joy unmixed to all included. The indiscriminate way in which seniors were reduced to juniors on the new list is very stinging. Besides, this "last straw" makes medical officers if possible more distrustful than ever of the powers that be, for the slight has been put upon more than one officer hitherto conspicuous for professional zeal and blameless conduct.

Malta, Jan. 12th, 1880.

THE WEATHER AT ALGIERS.

(From a Correspondent.)

IT is worthy of note that the severe weather which troubled nearly the whole of Europe during the month of December affected in a degree the northern coasts of Africa. A mild sorocco, or desert wind, swept over Algiers during the first few days of December, but it had not the blasting properties of the summer soroccos, when the inhabitants are compelled to keep indoors with closed windows. This was followed by a week of fine but rather chilly days, the lowest temperature in the daytime ranging between 47° and 50° Fahr. After two days of strong north-easterly and north-westerly winds, the rain came down in torrents on Dec. 14th, and continued both day and night with but little intermission till the evening of the 18th. At times the water came down almost in sheets, and on the nights of the 15th and 16th it thundered and hailed a little; at no time, however, was there any frost or snow, and the thermometer at night never fell below 42·9° in the town.

On Dec. 19th it cleared, and the weather has been beautifully warm and clear, with a very occasional shower at night, up to Jan. 15th. While London was visited by a succession of fogs, frosts, and snows, Algiers had an uninterrupted spell of such weather as we rarely see even in an English summer,—mild enough to be pleasant driving, and not too hot for walking exercise.

Is it not surprising that more of the sufferers by the English climate should not take refuge in this healthful winter resort, where great historic and artistic attractions are combined with all the comforts of modern civilisation and many of its amusements?

Obituary.

JOHN MACDONALD, M.D.,

OF BUENOS AYRES.

To the list of those of our profession who died at the close of 1879 must be added the name of John Macdonald, M.D., son of Alex. Macdonald, Esq., of Lyndale, Isle of Skye; and some mention should be made of the passing away of a valuable life, and one simply sacrificed to a sense of duty.

Educated at Glasgow and at Paris, and having taken his degree of M.D. at the former University in 1862, Dr. Macdonald studied at most of the principal hospitals in Austria and Prussia. It is, however, of his work in Buenos Ayres that we desire to lay some notice before our readers. He arrived there about fourteen years ago. Finding that no doctor could practise within the precincts of the town without a Spanish diploma, and not knowing the Spanish language, he, to acquire it, joined the Argentine army for a year as surgeon, which was then, together with the allied Brazilians, fighting against the Paraguayans, commanded by the notorious Lopez. While thus engaged, he was so successful in surgical operations as to be specially noticed by the authorities, by whom he was placed at the head of the hospital and ambulance corps of one of the divisions, and raised to the rank of surgeon-major. Returning to Buenos Ayres at the end of a year, he took his diploma, intending to remain there; but a special request from the commander-in-chief that he would not discontinue his services, accompanied by the expression of a high opinion of their value, appeared to him an appeal to his sense of honour. He remained, therefore, with the army to the close of the war, through continual privation and exposure, and experiencing many narrow escapes; suffering at one time from a severe attack of malarious fever, after having remained for three weeks in a swamp, and not taking off his boots once in that time.

In the year 1871 the memorable epidemic of yellow fever broke out at Buenos Ayres. Three medical men only remained—one only, Dr. Macdonald, remained till all was over—in a plague-stricken city of some 150,000 inhabitants. Of his devotion to his work some estimate may be formed from the fact that during this fearful epidemic he once attended as many as ninety cases in a single day. Medicine he supplied largely at his own expense; and in many instances death itself did not terminate his services, for he even advanced money to defray funeral expenses, too often never repaid. The fever lasted some months, during which time Dr. Macdonald was himself twice struck down by it. For his services he received almost nothing, abundantly as they had been acknowledged and extolled both by the Government and by the native and the English press. The medal which the Government offered he declined, *more suo*. It was not in his nature to value such things, even if they could have borne adequate witness, which, of course, they could not, to services of the highest possible order, and to the sacrifice of health gone for ever.

He remained at Buenos Ayres for a few years longer in varying conditions of health. It was hoped that a good

constitution and a singularly "plucky" temperament might in time do much to overcome the effects of past severe suffering. But it was not to be so, and when recovery was no longer to be hoped for it was determined in the autumn that Dr. Macdonald should leave for England, in fulfilment of the only remaining hope, that of dying at home. He landed in October exceedingly ill, and Sir W. Jenner diagnosed chronic hepatic inflammation, the result of malarial poison. With great difficulty reaching the Isle of Skye, he died on Dec. 7th, surrounded by nearly all his nearest relatives.

Those who from his early years knew him intimately, whether related to him or not, cannot trust themselves to speak of his nobility of character, his unbounded generosity, his perfect sense of honour. They would rather point to the facts of his life and his death. And when one thinks of that work calmly carried on in the pestilential streets, that heavy burden borne without help, of skill, sympathy, money, and, as the event proved, life itself placed, and knowingly placed, at the disposal of those whom he attended, his figure seems to stand out not unlike that of the hero of the ancient battlefield, and certainly not less glorious—

"——— non arma manu, non frena remisit;
Qualis erat, dextros defert in Tartara currus."

CHARLES BENSON, M.D. T.C.D.

DR. BENSON, whose death we announced on the 24th ult., was a graduate in medicine of the University of Dublin, a fellow and ex-president of the Royal College of Surgeons in Ireland, and held for a considerable time the Professorship of the Practice of Medicine in the latter institution, until failing sight obliged him to resign. Dr. Benson was one of the original founders of the City of Dublin Hospital, with which he was connected for a very long period as one of the visiting physicians, and on his retirement was appointed consulting physician. Some weeks since he was presented with an address on the occasion of his portrait being placed in the board-room of the City of Dublin Hospital, which referred to his untiring zeal in the interests of that institution, and trusted that many years might yet be spared to him, a hope which a few short weeks have dispelled. His remains were last Saturday interred in Mount Jerome Cemetery, and were followed to their last resting place by a very large number of the profession.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Members of the College on Jan. 29th:—

Fowler, James Kingston, M.B. Camb., Clarges-street.
Huggard, W. Richard, M.D. Queen's Univ., Hammersmith.

On the same day the following gentlemen were admitted Licentiates of the College:—

Alvares, Nicolas Santand, Ampthill-square.
M'Kee, Gerard Macklin Eccles, Overstone-road, W.

UNIVERSITY OF DURHAM. — At the Primary Examination for Degrees in Medicine and Surgery the following satisfied the Examiners:—

Cheetham, Walter Henry, M.R.C.S.
Giles, Bernard Faraday, M.R.C.S., L.S.A.
Lloyd, George Jordan, M.R.C.S., L.S.A.
Mantle, Alfred, M.R.C.S., L.S.A.
Pardington, George Lucas, M.R.C.S., L.R.C.P., L.S.A.
Porter, William Smith, M.R.C.S., L.R.C.P.
Roué, William Barrett.
Seager, Herbert West, M.R.C.S., L.S.A.
Wills, Joseph Pearce Budgett.
Wray, Charles.

One candidate referred in Botany, and two candidates referred in all subjects, will be permitted to re-enter for examination in April next.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 29th:—

Hebb, Richard Grainger, Brighton.
Volckman, Ronald, Norwood.

The following gentlemen on the same day passed the Primary Professional Examination:—

John Arthur Francis, St. Bartholomew's Hospital; Francis Henry Unsworth, London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The annual course of lectures at this College will be commenced on Monday next by Professor Parker, F.R.S., who will deliver nine lectures "On the Structure and Functions of the Vertebrate Skeleton"; on the completion of which, Professor Flower, LL.D., F.R.S., will give nine lectures "On the Comparative Anatomy of Man," in continuation of his course of last year. The lectures will be delivered in the theatre of the College on each Monday, Wednesday, and Friday, at 4 o'clock P.M., until completed.

THE Woburn Guardians have increased the salary of Mr. George A. D. Mahon, Medical Officer to the Workhouse, from £35 to £45 per annum.

THE Governors of the Harrogate Bath Hospital have increased the medical staff from two to three—viz., one physician and two medical officers.

WILLIAM MACLACHLAN, M.D., Doonbank, Dalmellington, has been appointed, on the recommendation of the Lord-Lieutenant of the County, a Justice of the Peace for Ayrshire.

ZYMOTIC DISEASES IN DUBLIN.—During the December quarter of the past year the deaths in the Dublin Registration District from zymotic diseases amounted to 629, being equivalent to an annual rate of 7·4 per 1000, a number largely in excess of the average (470) for the corresponding quarter of the previous ten years. Of these the deaths from scarlatina numbered 160; measles, 94; small-pox, 77; fever, 68; diarrhœa, 46; whooping-cough, 37; and diphtheria, 20.

A NEAT COTTAGE HOSPITAL, to accommodate about twenty patients, is to be built at Milnthorpe, near Kendal, Westmoreland, in memory of the late John Kitching, M.R.C.S. Eng., L.S.A., who, after practising at 61, South Audley-street, Grosvenor-square, London, retired to Milnthorpe, his native place, where he practised for thirty years, and died May 26th, 1879, aged eighty-three years. The hospital is to be built by his daughter, Mrs. William Bindloss, and his sister, Mrs. Thompson Bindloss, as a memorial to him. The plans have been prepared by Mr. Eli Cox, architect, Kendal, and the building is intended to be carried out immediately.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The first annual dinner of this Association was held on Wednesday, January 28th, when about twenty of the members and their friends were present. The President, Dr. J. Beresford Ryley, in proposing the toast of the evening, referred to the great difficulty which beset British practitioners who were desirous of obtaining a degree, and said that were some native University to open its doors to any practitioner able to pass its examination without insisting on residence, it would supply a want felt throughout the whole of the profession, and would obviate the necessity of men seeking abroad what they were prevented from obtaining at home. Dr. F. E. Pocock, the hon. secretary, in responding to this toast, with which his name had been coupled, gave a short sketch of the origin of the Association, and congratulated the members present upon the success of this the first annual dinner.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—The annual meeting of this Association was held on Wednesday, January the 28th, when the treasurer's report was received and adopted, showing the Society to be in a highly prosperous and flourishing condition. The following officers and Council for 1880 were duly elected:—President: Mr. W. A. N. Catlin. Vice-Presidents: Messrs. J. A. Baker, S. Cartwright, Coleman, Salter, F.R.S., and Dr. Smith, F.R.S. Edin. Treasurer: Mr. Edgelow. Hon. Secretary: Mr. Craigie. Council: Messrs. E. Bartlett, S. H. Cartwright, Fairbank, F. Fox, C. Gaine (Bath), Napier, W. Ranger, and A. Winterbottom. The first dinner of the Association took place in the evening at the Langham Hotel, S. Cartwright, Esq., in the chair, when over fifty Fellows and their friends were present, amongst whom were the President of the Royal College of Physicians and Surgeons, Sir William Gull, Mr. Young, M.P., Dr. Quain, the President of the Medical Society of London, Mr. Ransford, Professor Lister, Mr. Edwin Saunders, Dr. Andrew Clark, &c. &c.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.—At the annual meeting held on January 29th, 1880, the following office-bearers were elected:—President: H. Simpson, M.D. Vice-Presidents: R. W. Ledward, M.D.; J. Roberts, M.D.; P. Royle, M.D.; J. Thorburn, M.D. Hon. Treasurer: J. Stone, M.D. Hon. Secretaries: A. Wahltuch, M.D., and J. Broadbent, Esq. Committee: E. Bishop, Esq.; A. C. Clark, M.D.; C. J. Cullingworth, Esq.; A. M. Edge, M.D.; J. S. Fletcher, M.D.; R. D. Fox, Esq.; A. Emrys Jones, M.D.; T. Jones, Esq.; W. H. Maccal, M.D.; F. M. Pierce, M.D.; J. Tatham, M.D.; and J. Watson, M.D. Parliamentary Sub-committee: D. Leach, M.D.; F. M. Pierce, M.D.; P. Royle, M.D.; J. Tatham, M.D.; and J. Watson, M.D.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Denbighshire Infirmary and General Dispensary has received a second £500 under the will of Mr. Hugh Davies Griffiths, of Caerhun. The West Kent General Hospital, Maidstone, has received £218 5s., under the will of Mr. John Crowhurst. Mr. Henry Edwards, M.P., has given £200, Sir Frederic Johnstone, Bart., M.P., £52 10s., and Mr. G. E. Eliot, the Mayor, £35 to the Weymouth Royal Hospital and Dispensary. The Hospital for Women has received £200 under the will of Mrs. Harriet Kirkpatrick, and £100 from Mr. Baring Young. Mr. Hugh M'Kay has given £100 to the Hospital for Epilepsy and Paralysis, Regent's-park. The Ledbury Cottage Hospital has become entitled to £500 under the will of Mr. William Ireland, of Eastnor. The Southampton Dispensary has received £180 under the will of Mr. George Foster. The Earl of Sheffield has given £1000 to the Sussex County Hospital, Brighton.

Medical Appointments.

BATES, H. L., L.R.C.P.I., M.R.C.S.E., has been appointed Second House-Physician to Guy's Hospital, for February.

BERRY, F. H., M.R.C.S.E., has been appointed Senior House-Physician to Guy's Hospital, for February.

BURD, G. V., M.R.C.S.E., L.R.C.P.Ed., has been appointed House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital, vice Robinson, resigned.

CLEGHORN, Dr. H., has been appointed the Additional Examiner in Botany at the University of Edinburgh, vice Balfour, resigned.

CLOWES, F., D.Sc.L., has been appointed Public Analyst for the Borough of Newcastle-under-Lyme, at £10 10s. per annum, and 10s. 6d. per analysis.

CROOS, Mr. W. G., has been reappointed Public Analyst for the City of Norwich, to be paid by fees.

DEAN, T., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Burnley Urban Sanitary District, Lancashire, at £60 per annum.

DUFFIN, A. B., M.D., F.R.C.P.I., has been appointed the Additional Examiner in the Practice of Physic at the University of Edinburgh, vice Duckworth, whose term of office has expired.

DUKE, E., M.R.C.S., L.S.A.L., has been appointed a Medical Officer to the Clapham General Dispensary.

GULLIVER, G., M.B., has been appointed Resident Assistant-Physician to St. Thomas's Hospital, vice Sharkey, appointed an Assistant-Physician.

HOLMES, H., M.B., C.M., has been appointed Certifying Factory Surgeon for the District of Dunamanagh, co. Tyrone.

HOOLE, H., M.R.C.S., L.S.A.L., has been appointed Medical Officer for the North London Provident Dispensary, vice Caffyn, resigned.

HOPCROFT, T., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the District of Dorking.

KENNY, J. E., L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.D., has been appointed Medical Officer to the North Dublin Union Workhouse, at £150 per annum, vice Kirkpatrick, resigned.

LAKIN, C., L.R.C.P., L.M., L.F.P.S.G., L.S.A.L., L.A.H.D., has been appointed Medical Referee to the Liverpool Victoria Legal Friendly Society at Leicester.

LITTLE, R., L.R.C.S.I. & L.M., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Raphoe, co. Donegal.

MCBRIDE, J., C.M., has been appointed Certifying Factory Surgeon for the District of Forkhill, co. Armagh.

MCINTOSH, W. C., M.D., has been reappointed the Additional Examiner in Natural History at the University of Edinburgh.

MANSELL, E. R., M.R.C.S.E., L.S.A.L., has been appointed Second House-Surgeon to Guy's Hospital, for February.

MASTERS, J. A., L.R.C.P.I., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the District of Hednesford, Staffordshire.

MAYLARD, A. E., M.B., B.Sc., has been appointed Junior House-Surgeon to Guy's Hospital, for February.

MORTON, J., M.D., has been appointed Medical Officer to the Western Friendly Society, Glasgow, for the ensuing year.

MULLINS, E. A., L.K.Q.C.P.I., L.R.C.S.I., has been reappointed Medical Officer, Public Vaccinator, &c., for the Bangor Dispensary District of the Belmullet Union, co. Mayo, at £100 per annum and fees, and £10 per annum as Medical Officer of Health.

NOBLE, C. J., L.D.S., R.C.S.E., has been appointed Dental Surgeon to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Bartlett, resigned.

PEDEN, W. K., M.B., C.M., has been appointed Medical Missionary of the Blantyre Mission of the Church of Scotland, East Africa, vice Macklin, on leave.

POLAND, J., M.R.C.S.E., L.R.C.P.I., has been appointed Senior House-Surgeon to Guy's Hospital, for February.

PRATT, A., M.D., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator, Western District, Godstone Union, vice Bailey, resigned.

ROBINSON, T., L.F.P.S.G. & L.M., has been appointed Certifying Factory Surgeon for the District of Beragh, co. Tyrone.

RUSSELL, G. H., M.B., M.R.C.S.E., has been appointed Junior House-Physician to Guy's Hospital, for February.

SAVORY, W. S., F.R.C.S.E., M.B., has been appointed Consulting Surgeon to the Charter House, vice Callender, deceased.

SCOTT, A., M.R.C.S.E., has been appointed Junior Obstetric Assistant to Guy's Hospital, for February.

SEWELL, J. J., M.R.C.S., L.R.C.P.Ed., has been appointed third Attending Medical Officer to the Provident Medical Institution, Pimlico-road, vice Evans, retired.

SLADE-KING, E., M.D., Ext. L.R.C.P.I., M.R.C.S.E., L.S.S.Ed., Medical Officer of Health to the Ilfracombe Urban and Dulverton Rural Sanitary Authorities, has been appointed to a similar office by the Great Torrington Rural Sanitary Authority, vice Blyth, resigned.

SOUTHAM, F. A., M.B., F.R.C.S.E., has been appointed Resident Medical and Surgical Registrar to the Manchester Royal Infirmary.

SWEENIE, W. F., M.B., L.R.C.S.Ed., has been appointed Certifying Factory Surgeon for the District of Newtown-Cunningham, co. Donegal.

WAINWRIGHT, R. S., M.R.C.S.E., L.S.A.L., has been appointed Senior Obstetric Assistant to Guy's Hospital, for February.

WHITE, W. H., M.A., M.D., M.Ch., has been appointed Honorary Physician to St. Marylebone General Dispensary, vice Gabbett, resigned.

WILSON, R. J., F.R.C.P.Ed., has been appointed Physician to the Hastings and St. Leonard's Convalescent Home for Children, for the ensuing year.

WRIGHT, G. A., M.B., F.R.C.S.E., has been appointed Resident Surgical Registrar to the Manchester Royal Infirmary, vice Southam.

YATES, W., M.R.C.S.E. & L.M., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Richmond, Surrey.

Births, Marriages, and Deaths.

BIRTHS.

BATE.—On the 27th ult., at Northumberland Houses, Hackney, the wife of George Paddock Bate, M.D., of a son.

CONRY.—On the 23rd ult., at Alladale, Woolston, the wife of Staff-Surgeon Conry, R.N., of a daughter.

GWATKIN.—On the 23rd ult., at Higher Broughton, Manchester, the wife of Owen Gwatkin, M.R.C.S., of a daughter.

JAMES.—On the 29th ult., at Elgin-crescent, Notting-hill, the wife of Richard James, L.R.C.P.Ed., of a daughter.

MAUNSELL.—On the 9th ult., at Halifax, Nova Scotia, the wife of Surgeon-Major T. Maunsell, of a daughter.

ROBATHAN.—On the 25th ult., at York Villas, Prestonville, Brighton, the wife of George Beckett Robathan, M.R.C.S.E., of a son.

SMITH.—On the 15th October, at Kyneton, Victoria, Australia, the wife of Samuel Smith, M.R.C.S.E., of a son.

MARRIAGES.

NICHOLLS—FAULCONER.—On the 27th ult., at St. Matthew's, Oakley-square, Howard Hill John Nicholls, M.R.C.S.E., to Harriett, daughter of T. Faulconer, Esq.

O'BRIEN—BANISTER.—On the 14th ult., at St. Gregory's, Cheltenham, Henry O'Brien, Surgeon-Major, Army Medical Department, to Ethel Bessie, daughter of Henry Banister, Esq.

DEATHS.

CORRIGAN.—On the 1st inst., at Merrion-square, Dublin, Sir Dominic John Corrigan, Bart., M.D., aged 77.

DYER.—On the 28th ult., at Alexander-square, Henry Sumner Dyer, M.D., aged 71.

EVANS.—On the 27th ult., at Bath, Evan Evans, M.R.C.S.E.

GODSON.—Found dead, on the 19th ult., Henry Godson, M.R.C.S.E., of Coldhurst, Oldham, Lancashire.

HAY.—On the 2nd inst., at Porlock, Somersetshire, Richard Francis Hay, M.R.C.S.E., eldest son of W. H. Hay, M.D., of Bridport, aged 33.

HENN.—On the 30th ult., at Winton-avenue, Rathgar, Edmund Poole Howell Henn, L.K.Q.C.P.I., aged 23.

KENNY.—On the 4th ult., at Priest's-road, Tramore, Dr. James Kenny.

LEADER.—On the 28th ult., at Keale House, Mill-street, co. Cork, John Leader, M.D., aged 72.

MCCARTHY.—On the 8th ult., at the Royal Naval Hospital, Jamaica, Dr. William McCarthy, Army Medical Department.

OWEN.—On the 29th ult., at Oxford, Edward R. Owen, F.R.C.S.E., aged 70.

SKELTON.—On the 31st ult., at Plymouth, John Skelton, L.R.C.P.Ed.

WEST.—On the 24th December, at Tavistock, Richard Eliot West, M.R.C.S.E.

YATE.—On the 8th December, at Shanghai (accidentally shot), Henry Wright Yate, M.R.C.S.E., aged 23.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Feb. 5th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 30	30·17	S.E.	37	37	..	50	22	..	Foggy
,, 31	30·34	S.E.	35	35	..	50	23	..	Foggy
Feb. 1	30·37	S.E.	36	35	..	48	28	..	Foggy
,, 2	30·33	S.E.	32	32	..	47	29	..	Foggy
,, 3	30·45	S.	42	41	..	47	30	..	Overcast
,, 4	30·43	S.W.	37	36	..	46	33	..	Foggy
,, 5	30·15	S.W.	30	..	..	40	27	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

BLINDED AND IN BONDS.

THE vagaries of feminine taste in the matter of dress are traditionally and essentially fearful and inexplicable; but that is no reason why they should be allowed to play wanton havoc with health. At the present moment women go about hobbled after the fashion adopted by our forefathers to prevent the straying of their horses and asses when turned out to grass. Bonds encircle the legs and knees, and, besides preventing a decent gait, expose the wearers of such ridiculous gear to the risk of falling, particularly when hurrying across a crowded thoroughfare or even stepping upon a curb-stone. This is sufficiently monstrous; but even worse, because persistent, mischief is done by the practice of binding a veil tightly round the face in such a way that not only is the sight obscured, but the eyes are mechanically irritated by the fabric clouding them. Cases of something worse than mental annoyance and "nervousness," distinctly traceable to this cause, are falling under the observation of practitioners, and when the practice is denounced, "fashion" is pleaded as its excuse. We are not disposed to waste words in remonstrance; but it is simple duty to point out that if women please, in defiance of common sense, to resort to these practices they must take the consequences. The veils worn by our mothers and sisters of the last generation hung freely at a reasonable distance from the eyes, and could be thrown back. Those of to-day are semi-transparent eye-bandages, and must tend to disturb the vision, as well as to set up irritation in the eyelids. If the women who dabble in medicine would devote any information they may happen to have acquired to the correction of the follies of their sex, they might do some service.

A. B. B.—Budd; Liebermeister in "Ziemssen's Cyclopædia"; Harley in "Reynolds's System."

Mr. C. Lewin.—We cannot advise. Consult a practitioner.

SUDDEN DEATH FROM TORN INTESTINE.

To the Editor of THE LANCET.

SIR,—The following case appears to me worthy of record.

On the evening of the 15th instant I was called in to a case of sudden death, and found the body quite cold, disposed in a kneeling position across a box, half-dressed, with one leg in the trousers. The corpse was that of a man, aged sixty-three, the subject of double rupture, for which a truss had been worn, and was then on and effectually securing the herniæ. By order of the coroner I made a post-mortem on the following evening, and found externally a slight injury to the left little finger, from which a few drops of blood had exuded, and a linear bruise across the abdomen, corresponding to the edge of the box. The small intestines were injected, and their surface was greasy, but not adherent. On carefully tracing out the intestine, a transverse rupture, nine lines in length, was found about the middle of the small intestine at its junction with the mesentery, from which a small quantity of intestinal contents had oozed. Other abdominal organs were healthy. An extreme thinning of the coats of the small intestines was observed throughout, especially at the seat of rupture. There was no sign of ulceration or any thickened edge at the seat of the injury, and no enlargement of Peyer's patches. The pericardium was universally adherent, and the heart muscle showed traces of fatty degeneration microscopically. The left side of the heart was filled with dark fluid blood. The early stage of peritonitis showed that the lesion had occurred during life. The subject of it was in the act of dressing, and the effort of placing the second leg in the trousers was probably the immediate cause. The sudden pain of the rupture probably caused the fall, and the syncope became fatal at once owing to the state of the heart muscle.

I find no such case recorded as a cause of peritonitis in Ziemssen, and a search through ten years of THE LANCET fails to find one similar.

I am, Sir, yours faithfully,

JOHN H. GALTON, M.D. Lond.

Woodside, Anerley-road, S.E., Jan. 19th, 1880.

MIDDLE-CLASS HOSPITALS.

THE following letter has just been issued. It gives the views of the Committee of the Home Hospitals Association for Paying Patients on the recent decision of the Master of the Rolls:—

"We beg to commend to your careful consideration the enclosed papers relating to a public meeting of great importance for establishing hospitals for paying patients. You will observe that one-half of the preliminary capital fund has already been subscribed. The Managing Committee, having experienced insurmountable difficulties in converting the house they had secured in the centre of the 'W.' district into a 'Pay Hospital,' are now fitting up an eligible freehold house which they have purchased in Fitzroy-square. A recent decision of the Master of the Rolls proves that none but freehold premises can be utilised without the consent of the ground landlord. This decision forces the Committee to make a strenuous effort to obtain the second half of the preliminary capital fund, and it has been decided to confer on those who assist them in this task the privileges of governors or members. It is hoped that the many who are interested in the progress of this most successful and beneficent movement will show their practical sympathy by assisting to raise the additional sum required, £10,000, without delay. Such a sum will enable the Committee to proceed vigorously with the scheme they have so carefully elaborated.

"The Pay Hospital will be the means of rendering inestimable service to many who are unable, when ill, to obtain the skilled nursing and hygienic surroundings without which recovery is scarcely possible. The Committee rely upon the sympathy of the public in the difficulties they have had to overcome, and they look forward with confidence to its continued approval and support to enable them to carry their undertaking to a successful issue.

(Signed) "NORTHUMBERLAND, President.
"FREDERICK COX, Treasurer.
"HENRY C. BURDETT, Hon. Sec.

"Home Hospitals Association, 246, Regent-street, W."

A Successful Competitor.—Many members of the Council, Court and Board of Examiners of the College have carried off collegial prizes, as Messrs. Swan (four times), S. Cooper, Lawrence, Hodgson, Earle, Stanley, Stafford, Phillips, Curling, Calloway, Birkett, H. Lee, Hulke, Wood, and Heath.

Mr. Cunliffe will find the information desired in the Medical Register or Medical Directory.

Mr. W. J. Tyson.—The cases are marked for early insertion.

THE FUNCTIONS OF RELIEF SOCIETIES.

To the Editor of THE LANCET.

SIR,—The Secretary of a branch Society called on me the other day concerning a person who had applied to them for relief, and whom I, as resident medical officer of a public institution, had been attending. He wanted full information as to diagnosis, prognosis, and what kind of relief would benefit the patient most, and all this information to be written. I replied that I could give him no information concerning any patient under my care without the patient's consent, and, further, that I could not do so in writing without the usual fee. Will you kindly favour me with your opinion on the point?

I am, Sir, yours faithfully,

Jan. 27th, 1880. A SUBSCRIBER.

*** The request for a written statement of the several details mentioned was preposterous, and our correspondent was justified in refusing to give particulars of diagnosis and prognosis without the patient's consent, and, even with that consent, in writing without a fee. The Secretary might properly have consulted our correspondent on the sort of relief which would best benefit his patient, and no doubt, had he done so, he would have received willing assistance in furthering the object of the Society. Is the Society proposing to institute an inquisition of diagnosis and prognosis in cases under medical care which may be fitting objects for its aid?—ED. L.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Mr. Heath requests us to mention that Mr. Butcher's ligature of the carotid for subclavian aneurism was not said by him to have been "by mistake," the case being one where ligature of the subclavian was found to be impossible (*vide* Butcher's Operative Surgery, p. 855).

Dr. Maurice G. Evans.—We cannot touch a matter which is wholly personal.

COMPULSORY MEDICAL ATTENDANCE.

To the Editor of THE LANCET.

SIR,—Will you kindly inform me, if a medical man is called to anyone professionally, if there is any Act of Parliament to compel him to attend, and oblige, Yours obediently,

Whitechapel, Jan. 30th, 1880. W. J. PENFOLD.

*** No; but he must exercise judgment in refusing to attend. For juries at inquests are somewhat apt, in cases of fatal accident and in fatal cases of other sorts, where a medical man may have been summoned and refused to attend, to pass verdicts as if a practitioner were really bound to attend when sent for, irrespective of his personal feelings in the matter.—ED. L.

SOUTH DUBLIN UNION: DUTIES OF THE MEDICAL OFFICERS OF THE WORKHOUSE.

AT a meeting of the Board of Guardians of the South Dublin Union last week, a communication was received from the medical officers of the workhouse, objecting, in consequence of want of time, to keep the book prescribed by the Local Government Board, setting forth the names, diseases, &c., of the sick inmates under their charge, and trusting that the Board would not enforce the order. After some discussion, a resolution was adopted, to the effect that the medical officers should not be relieved from any of the duties which the law had imposed on them.

Dr. Thudichum's letter, we regret to say, arrived too late for full consideration this week, but shall be dealt with in our next number.

Mr. S. O. Moses should refer to the Medical Directory for the current year.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—Having lately seen the letter of Professor Parkes which you have given to the world, I desire to bring under your notice and that of the medical profession the opinion of the late George Norman, Esq., an eminent surgeon of this city, on the above subject.

Many years ago I had occasion to take to Mr. Norman a man who had made a proposal to insure his life. Mr. Norman, having eyed him over, said, "I think, Sir, you have not got the best-formed chest that I have met with, and I should like to examine you." He thereupon went up to the man, unbottoned his waistcoat, and tapped his chest, and, drawing himself back with a look of surprise, said, "Pray, Sir, do you smoke?" "Yes, Sir, I do." "Pray, what do you smoke?" "I smoke cigars." "How many do you smoke a day?" "Three or four, four or five; I think I can conscientiously say I never exceed six." "Well, Sir, as a medical man, I must tell you that I disapprove of smoking altogether; but if you must smoke, by all means smoke a pipe." Mr. Norman then wrote: "I have seen and examined Mr. So-and-so, and think his life eligible for insurance.—George Norman." The papers were forwarded to the office, and a policy was granted for £500. It continued in force for about six or seven years, when the man died, and those who represented the policy received £500, for which about £100 had been paid. Thus ended that part of the transaction.

Several years after I met Mr. Norman at a friend's house, and was placed next to him at the dinner-table. In the course of conversation over our wine, I adverted to the foregoing circumstance, and said I had often thought upon what he said about smoking a pipe in preference to a cigar; but I had never been able to understand his theory. "Oh," he said, "I am precisely of the same opinion now as I was then. I take as my groundwork that all tobacco is poisonous. If you have any doubt about it, you have only to cut up one cigar, steep it in a wineglass of water, and drink it. It will poison you to all intents and purposes. Therefore I say if a man must smoke let him smoke a pipe, because he only inhales the smoke; but if he smokes a cigar he has got the poison within his lips, and, notwithstanding he may expectorate, I am of opinion that a certain portion of the poison finds its way into the stomach, and that when it gets there it never gets out again, for the stomach is so composed that, although it will take up everything in the shape of nutriment, it will turn away from everything deleterious, just as a worm will turn away from a grain of salt. For what do we frequently find? A man goes on smoking and smoking, and all of a sudden he finds himself deprived by paralysis of the use of one arm or one leg or one side. Why, Sir, the man has been gradually poisoning himself."

Now, it so happens that at this very time I have three male friends all suffering from paralysis, one somewhat under sixty, the others from sixty to sixty-five. The two youngest have been great smokers, one principally smoking a German pipe, but not wholly so; the other a great smoker of cigars; whereas the third, whom I have known nearly twenty years, has been entirely a non-smoker. Then I know another gentleman, who is upwards of eighty years of age, who told me not long since that for the last forty years of his life he had regularly smoked two cigars and drank a glass of whisky-and-water every night before going to bed. This gentleman is hale and hearty, and to be seen out most days whenever the weather is favourable.

Now, what I would beg to suggest is that some half-a-dozen gentlemen in good professional practice should be asked to institute an inquiry among their paralytic patients, so as to ascertain whether smoking had anything to do with inducing paralysis, and for that purpose to inquire whether the parties had been smokers of pipes or cigars, and to what extent; and if smokers of pipes, what sort of pipe. Likewise to inquire whether paralysis was more frequent among men than women, or more severe in the one than the other.

As there is considerable doubt upon the above subject, not only in the minds of medical men, but in the public at large, it is desirable that the point should be decided; and if it be ascertained that cigar-smoking is the more injurious of the two, let it be made known, and the public be recommended, as Mr. Norman said, "If you must smoke, by all means smoke a pipe."

I can remember seventy years back, and for many years after, when it was rare to see a cigar smoked, the ordinary common clay-pipe being generally used; but cigars have taken their place, particularly among the rising generation, who should be dissuaded from going on to poison themselves unconsciously.

I enclose my card, and am, Sir, yours &c.,

Bath, Jan. 26th, 1880. C.

"A NUISANCE AFLOAT AT RAMSGATE."

A CORRESPONDENT sends us the following account of the nuisance still, it appears, afloat at Ramsgate:—

"What good has resulted from the proceedings of the Committee? On Jan. 1st we have the *Vittorio* in the harbour, her deck covered with bones at least two feet deep; the hulk *Eids-vold* is then placed alongside her, and the bones transmitted, the process lasting over a week, and with a terrible nuisance resulting. The hulk is then brought into the basin, and moored as near the habitations as possible (a most unnecessary proceeding), in reckless disregard for the comfort and health of the townspeople. The vessel named *John Hannah* is next placed alongside the *Vittorio*, is loaded, and proceeds to sea. The *Elizabeth Morton* then takes her place to receive cargo. All this time we have the hulk, with the gases visibly escaping from her. On Jan. 22nd this was going on to a great extent, and a south-west wind wafting the gases directly over the town. Late on Saturday (Jan. 24th), or early on Sunday morning (Jan. 25th) last the hulk was taken out to the *Elizabeth Morton* to turn over the bones to her, and it may take as long to unload the hulk as it did to load her, which was over a week. The *Vittorio* is about to be placed on the repairing slip, called the gridiron, in close contact with the town, for examination and repair if worth it. Thus we may have the pleasure of her company for weeks to come. The harbour is under the control of the Board of Trade, and some persons are making money out of the bones. A boatman replied to me, on my saying, I see the bone ships are still here, 'All right, more days more dollars, you see.'"

Mrs. Meredyth will obtain assistance in her search from any well-established instrument-maker.

Mr. J. Neil.—We have no recollection of seeing the paper.

THE POSTAL MICROSCOPICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—Thanks to your insertion of letters on the subject, the effort made by the Postal Microscopical Society to establish a separate histo-pathological section has been most successful, and a number of boxes have been placed in circulation. Most of the slides have been of a very high order; some sent by a professional mounter, and others the work of amateurs (medical men), are triumphs of section-cutting, injecting, staining, &c., and, being accompanied by accounts of the cases from which they were taken, are thus made exceedingly instructive. It is a great pity that slides, illustrating rare forms of disease, or original investigations into the causes of morbid action, should be seen by the comparatively small number of medical men who attend the meetings of Societies, and it will be a great boon to the profession generally if those who have such slides to exhibit would place them at the disposal of this Society, that they may be seen by any of us who are interested in microscopy. The boxes have been gradually improved, so that it is almost impossible for properly-mounted slides to be injured in transit. The annual subscription is very small—namely, 5s.

Any information about the Society will be gladly given by the Hon. Sec., Mr. Alfred Allen, Cambridge-place, Bath, or by,

Yours truly,

Castle Cary, Jan. 30th, 1880. C. P. COOMBS, M.D. Lond.

NERVE-STRETCHING.

To the Editor of THE LANCET.

SIR,—With reference to the letter of Dr. A. W. Johnstone in your issue of Dec. 13th, 1879, regarding nerve-stretching in tetanus, I should like to inquire whether the substitute which I proposed for such in THE LANCET of July 3rd, 1870—viz., freezing or partial freezing—has ever been tried in this disease. That the temporary interruption of the nerve-current by freezing often produces an effect which lasts for days, is a certainty, and I would suggest this simple procedure to be tried in a case of tetanus.

Dr. Johnstone's treatment does not appear to have been favourably received in England, the cause being probably the serious nature of the operation that has to be performed in isolating the nerves before stretching; and, in lieu of it, I would suggest small incisions over the nerves to be acted on, and the application of the ether spray so as to freeze or partially freeze the nerves. With superficial nerves, or in very thin people, the incisions would not be required.—Yours &c.,

RICHARD WOLSELEY, M.D.,

Halifax, N.S., Jan. 7th, 1880. Surgeon-Major, A.M.D.,

ELASTIC EXTENSION IN JOINT DISEASE.

To the Editor of THE LANCET.

SIR,—The principle of "persistent elastic extension" effected by Mr. Bryant's splint occurred quite independently to my mind some three years ago, and has been practised by me in the few cases which have come under my care. My object in writing, however, is simply to say that I have in one case of incipient hip-joint disease combined elastic extension with immobility by means of a common stillion (instead of india-rubber) applied to a modified Thomas's splint, and enabled my patient to get about and enjoy fresh air and some exercise, with the joint in the best possible condition for obtaining a cure without shortening of the limb. By the stillion one is able to register exactly the force exerted.

Yours obediently,

Darnley-road, Hackney, Feb. 1880. W. J. V. HARLE.

ERRATUM.—The article on "Trichinosis" referred to in our last number p. 181, appeared in the *Veterinary Journal*, not in the *Veterinarian*.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Buzzard, London; Dr. Dobell, London; Dr. Mahomed; Mr. Wharton Jones; Mr. R. C. Lucas, London; Dr. Thudichum, London; Mr. G. Fleming, London; Mr. L. Tait, Birmingham; Mr. Hoole, Hornsey; Dr. Bower, Bedford; Mr. Grinling, Burton-on-Trent; Mr. Marsh, London; Dr. Maclachlan, Patna; Dr. Ermengen, Brussels; Mr. Maclagan, Edinburgh; Messrs. Lindsay and Co.; Mr. Cunliffe, Mytholmroyd; Messrs. Southall and Co., Birmingham; Mr. Graham; Mr. Murray, Newcastle; Mr. Venman, London; Mr. Lakin, Leicester; Mr. Waters, Okehampton; Mr. Franklin, Melbourne; Mr. King, Leeds; Messrs. Berrall and Co., London; Mrs. Catlin, Stoke Newington; Mr. Craven, Southport; Messrs. Clarke and Co.; Mr. Bryan, Wakefield; Mr. Scott, Manchester; Mr. Harrison, Liverpool; Mr. Scott, Orkney; Mr. Biggs, Bath; Dr. Armstrong, Newcastle-on-Tyne; Dr. Coombs, Castle Cary; Dr. Lawton, Poole; Mr. Crerer, Maryport; Mr. M. Morris, London; Dr. Evans, Cardiff; Mr. Craigie, London; Dr. Wahltuch, Manchester; Mr. Broadbent, Manchester; Mr. Snell, Sheffield; Dr. Duffin, London; Dr. England, Dover; Mr. Dawson, Newcastle-on-Tyne; Mr. Nell, Macclesfield; Mr. J. N. Beach, London; Mr. Penfold, London; Dr. Pocock, London; Dr. Griffith, Harrow-road; Mr. Chilcot, Bristol; Messrs. Shirley and Murphy, London; Messrs. Young and Postans, London; Mr. Cox, Kendal; Mr. E. Duke, Clapham; Mr. Cottle, London; Mr. Harle, Hackney; Dr. Blomfield, Lynn; Mr. Page, Sydenham; Mr. Luxton, Tavistock; Mr. Smith, Netherton; Dr. Tatham, Salford; Mr. Tallack, London; Messrs. Voncier and Co., London; Dr. Slade-King, Ilfracombe; Mr. Seymour, Tewkesbury; Mr. James, Notting-hill; Mr. Dowman, Pondoland, South Africa; Dr. H. White, Brompton; Dr. Ridge, Enfield; Messrs. Harvey and Reynolds, Leeds; Mr. Pring, Pwllheli; Mr. Brett, Leicester; Dr. Smith, Cheltenham; Mr. Barnard, Edinburgh; Mr. J. W. Barnes, London; Mr. Budd, Edinburgh; Miss Newdegate, Dublin; Messrs. Savory and Moore, London; M.R.C.S.; A Medical Officer; A General Practitioner; T. P.; Omicron, London; G. C. G., Dalhousie; Scratch; A Subscriber; A. E. B.; S. E. O.; Secretary, Grantham; F.R.C.S., Birmingham; Emigrans; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Wilson, Stamford Hill; Mr. Jones, West Bromwich; Mrs. Rahn, Ipswich; Mr. Godfrey, Northampton; Messrs. Baildon and Son, Edinburgh; Dr. Waters, Liverpool; Mr. Roben, Jersey; Dr. Lister, Ashton; Mr. Maclehose, Glasgow; Dr. Buchanan, Glasgow; Mr. Rogers, Cowes; Mr. Hough, Oakham; Mrs. Bedingfield, London; Mr. King, Leeds; Mr. Palmer, Nayland; Dr. Tibbits, Warwick; Mr. Cornish, Manchester; Mr. Coward, Huddersfield; Dr. Seguin, New York; Mr. Lewis, Edinburgh; Dr. Johnston, Leicester; Mr. Owen, Fishgard; Dr. Rutherford, Sedgefield; Mr. Spiers, Leeds; Mr. White, London; Dr. March, Bradford; Mr. Cameron, Cambuslang; Mr. Lanwarne, Hereford; Mr. Jones, Barry Port; Mr. Cairns, Wakefield; Dr. Hay, Bridport; Mr. Appleton, Beverley; Mr. Berry, Upwell; Mr. Lee, Cannamore; Dr. Wigg, Derby; Mr. Atkin, Higher Broughton; X. Z., Felling-on-Tyne; Alpha; Rector, Lewes; B., Sheffield; M.D.; Surgeon, Manchester; M.R.C.S.; Phaeton; G. P. B., Bury; B. D. F.; Alpha, Burbage; A. B.; A. K., Horncastle; Horace; Delta; Omega, Stoke-on-Trent; N. R., Trengothel; W. S.; B.A., F.R.C.S.; M. B. W.; Query; M. or N.; Locum Tenens; Medicus, Ditton Priors; Surgeon, Newcross; D. V., Harrow; A. B. C.; V. C., London; Doctor, London; T. T. B., Alfreton, &c.

Mining World, Journal of the Society of Arts, Bombay Gazette, Sunderland County Herald, Old Jonathan, Dover and County Chronicle, Lincoln Gazette, Land and Water, Social Notes, West Cumberland Guardian, Western Daily Mercury, Exeter and Plymouth Gazette, Richmond Times, &c., have been received.

NOTICE.

THE LANCET is now Enlarged to EIGHTY PAGES, giving additional space for the Scientific Papers of our Contributors. A first issue will be made each week at Seven o'clock on Friday morning, *for the Wholesale Houses only*, to facilitate the delivery in country districts soon after the arrival of the early trains. The Journal is also CUT AT THE EDGES. Another new feature is an INDEX to ADVERTISEMENTS, and their classification as far as possible, with NAMES of ADVERTISERS. (*See p. 2 of Advertisements.*)

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Medical Diary for the ensuing Week.

Monday, Feb. 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Mr. A. Pearce Gould, "On a Case of Melanotic Sarcoma of the Penis." — Dr. Woakes, "On Ear-sneezing and Ear-giddiness." — Dr. Farquharson, "On some Therapeutic Superstitions."

Tuesday, Feb. 10.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY. — 8 P.M. Ballot. — 8½ P.M. Mr. Lawson Tait: "The Antiseptic Theory tested by the Statistics of 100 Cases of successful Ovariotomy." — Dr. V. Carter: "Contributions to the Experimental Pathology of Spirillum Fever."

Wednesday, Feb. 11.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
HUNTERIAN SOCIETY.—7½ P.M. Annual General Meeting for the Election of Officers."—8 P.M. Hunterian Oration, by Dr. Pye-Smith.

Thursday, Feb. 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."

Friday, Feb. 13.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Conversation and Exhibition of Objects.
HUNTERIAN SOCIETY.—Annual Dinner at the Albion, Aldersgate-street.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Henry Morris: "Traumatic Salivary Fistula treated by passing a fine Catgut Bougie from the Mouth along Stenson's Duct." — Mr. Hulke, "On a Case of Sutural Union of the Median Nerve in the lower part of the Forearm five weeks after division by a broken glass bottle, followed by return of function."—Dr. Sangster: "Disturbed Nutrition, with Suppuration and Exfoliation of the Nails, probably of Strumous origin."—Mr. Heath, "On two Cases of Popliteal Aneurism Cured by the Application of Esmarch's Bandage."
ROYAL INSTITUTION. — 8 P.M. Evening Meeting.—9 P.M. Mr. William Preece, "On Wheatstone's Telegraphic Achievements."

Saturday, Feb. 14.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Pauer, "On Sebastian Bach." (With Musical Illustrations.)

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N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

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